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The export induced pattern of growth and development in Trinidad and Tobago, 1928--1968.

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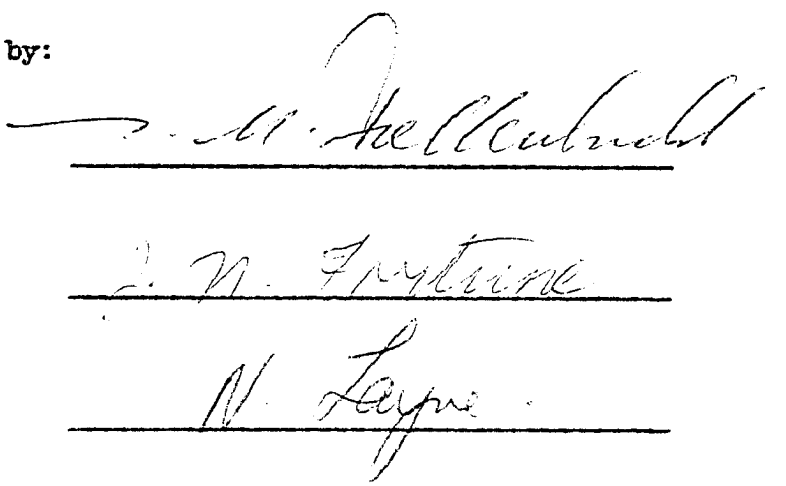
THE EXPORT INDUCED PATTERN OF GROWTH AND DEVELOPMENT IN TRINIDAD AND TOBAGO, 1938-1968.

by
Leslie M. Scotland

A Thesis
Submitted to the Department of Economics in partial fulfillment of the requirements for the Degree of Master of Arts at the University of Windsor.

Windsor, Ontario
1971

Approved by:



ABSTRACT

This paper traces the process of export growth of Trinidad and Tobago over the period 1928-1968 with a view to assessing its impact on the economy.

At the beginning of the period the country was an agricultural export economy dependent on two commodities, sugar and cacao. By the end of the period, the latter had lost much of their significance and were replaced by petroleum. The Gross National Product grew very swiftly in the post-war period, as did National Income per capita, yet the major features of underdevelopment, massive unemployment and dependence, were still in evidence in 1968.

We proceeded to examine the export base and evaluate their prospects, given world marketing conditions. A detailed study was then undertaken of the structure of the economy and the strategy of economic planning utilized by local planners. An attempt was made to see what degree of structural change was accompanied by rapid growth of G.N.P. and per capita income.

It was found that, although Trinidad may be among the faster growing nations of the world, she is, at the same time, one of the most highly dependent of world nations. Since a large part of her exports are petroleum, the growth of exports and the economy are closely tied with the growth of the enclave. In other words, a fast growing and significant enclave can expand and communicate this expansion to the G.N.P., with limited impact on the structure of the economy.

ACKNOWLEDGEMENTS

I wish to express my gratitude to Dr. Z.M. Fallenbuchl for the time he spent on my thesis and for his constructive criticisms which led to subsequent improvements. He was instrumental in guiding this study in its initial stages.

To the staff of the library, I owe great appreciation for their efforts in obtaining much of my information through inter-library loans. I would also like to thank Mr. J.K. Foo, with whom I had fruitful discussions and exchange of ideas. As well, Prof. K. Levitt, of McGill University, very kindly made constructive suggestions. My sincere thanks also go to Professors M. Fortune and N. Layne, members of my thesis committee.

Finally, I wish to thank Mrs. J. Braithwaite for the long hours which she devoted to typing my thesis.

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INTRODUCTION

Two islands, twenty-two miles apart and 1,980 square miles in area, comprise the state of Trinidad and Tobago. Being only 7 miles off the South American coast near Venezuela, Trinidad is physically similar to the coastal region of that country and in flora and fauna differs from other Caribbean islands to the north.[1]

Geographically, its climate can be described as hot and wet with little range of temperature; temperature is lowest in January when it averages 77° F. and warmest in May when it averages 81° F. There is a wet season from May to December with a break in September, but overall the average yearly rainfall of the two islands amounts to a modest 76 inches, although in some parts of eastern Trinidad it reaches 100 inches.[2]

Trinidad has three mountain ranges, each extending from east to west with the lowland areas between them each containing an extensive swamp. Smaller Tobago, on the other hand, exhibits a similar physical appearance as the other Caribbean islands to the north and is generally slightly drier and less humid than Trinidad.

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[1]Alan Eyre, A New Geography of the Caribbean (London, 1964), p. 29 and Mary Slater, The Caribbean Islands (New York, 1969), p. 228.

[2]John MacPherson, Caribbean Lands, A Geography of the West Indies (London, 1964), p. 58.

The 1960 population census reported a total population of 827,957 of which Africans and Indians comprised about 80 per cent, the remaining 20 per cent being made up of a wide diversity of ethnic groups.[3]

Christopher Columbus discovered Trinidad and Tobago on his third voyage in 1498, but no serious attempts were made at settling the former apparently due to lack of Spanish interest and the violent hostility of the native indians. The indians naturally resisted the violent methods Spain were employing to conquer the island. When Spain did succeed in gaining complete control in 1592, her interest was not in Trinidad per se, but in the discovery of the mythical city of "El Dorado" on the South American continent. In fact, the Spanish governor of Trinidad, Don Antonio de Berrio, spent almost the whole of his private fortune exploring the Orinoco searching for this mythical city. At this time he founded the Spanish capital of Trinidad, San José de Oruña, which is today simply called St. Joseph. It was the legend of the day that there existed somewhere in the hinterland of the Spanish main, presumably on the banks of the Orinoco, a fabulously wealthy city of gold. The legend was sufficiently strong to arouse the interest of the English, who in the person of Sir Walter Raleigh vigorously joined the search. Thus the Spanish attitude to Trinidad was influenced by the nearness and convenience it afforded as a base for expeditions into South America.[4] Eric Williams, the Prime Minister

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[3]Eyre, op. cit., p. 29 and Max B. Hill ed., Caribbean Economic Almanac 1964-1966 (Port-of-Spain, 1964), p. 191.

[4]Sir Alan Burns, History of the British West Indies (London, 1965), p. 87, 165. For a good account of the early settling problems see Gertrude Carmichael, The History of the West Indian Islands of Trinidad and Tobago 1498-1900 (London, 1961), p. 15-32. A good

of Trinidad and Tobago, writes:

> This was what attracted the Spaniards who emigrated--the magnificence of the conquistadors, the wealth of Potosi, the chimera of El Dorado with its cities whose streets were paved with gold. A benighted, poverty-stricken island like Trinidad could never hope to compete with this.[5]

In other words, Spain, rather than economically exploit the resources of the country, "put her insatiable desire for gold before that of creating a stable trading outpost".[6] The irony of this can be seen, when comparison is made with the smaller islands who were then enjoying the prosperity that the sugar industry afforded, with the use of slave labour.[7] In spite of this, a flourishing trade in tobacco was reported, and the exports were exchanged for manufactured goods of English and Dutch origin.[8] Williams, writing on this period states that: "Tobacco was at the time the basis of Trinidad's economy".[9] But at an official level, the tobacco trade was not encouraged. The Council of the Indies, a Spanish governing body responsible for the administration of Caribbean possessions, ordered governor De Berrio to cease cultivation of tobacco forthwith, as it was in contravention of Spanish policy of all colonial trade passing through or with the mother country. De Berrio flatly refused and he

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description is also available of De Berrio's governorship of Trinidad in Barbara Hill, "The Richest Trade Center of the Indies: A Vision of Trinidad's Future", Caribbean Quarterly, Vol. 10, No. 4 (Jamaica, 1964), p. 33.

[5]Eric Williams, History of the People of Trinidad and Tobago (Port-of-Spain, Trinidad, 1962), pp. 12-13.

[6]Carmichael, op. cit., p. 26.

[7]It was not until the beginning of the 18th Century that slave labour was employed in Trinidad, ibid., p. 26, even then only on a limited scale in comparison to Barbados and other Caribbean Islands.

[8]Ibid., p. 26. [9]Williams, op. cit., p. 15.

was promptly removed as governor of the island.[10] Again, this seems ironic, in that Spain was unable to furnish the requirements to make trade between Trinidad and the mother colony possible. What was equally true as well, was her apparent inability to defend the island from outside attack. It was noted that she was unable to provide military reinforcements, whether soldiers or ships, or to supply the necessary white population on which national security could be based. Requests for these necessities by Spanish governors in Trinidad perpetually met a negative response in the mother country. The tobacco industry died a painful death. Subsequently, the economy picked up as cocoa cultivation increased, but again slumped as the crop was wiped out by diseases in 1727. The cocoa-based economy did not provide the durable stimulus to the economy as sugar was doing in the islands further north. Frequently plant diseases and drought wiped out the crop and rained economic misery on the inhabitants.[11] The Cabildo, a local body appointed to conduct police and government of cities and towns, was affected to such an extent by the prevailing economic conditions, that it could neither repair the Casa Real, which was its official residence nor could it afford to travel to Port-of-Spain, a mere 6 miles away, to visit the governor. Coffee and corn were also cultivated, but their importance seemed to be minimal.[12]

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[10]Carmichael, op. cit., pp. 26-27.

[11]Barbara Hill, op. cit., p. 33 and Carmichael, op. cit., p. 33.

[12]Carmichael, op. cit., pp. 35-36.

Another problem the Spanish administration were faced with, was the preponderance of French citizens over those of Spanish descent among the white population. This was occasioned by the revolt in France and Haiti and by weak attempts at settling the island by means of granting free land to white settlers, who came from nearby French islands.[13] Among the French, there were many with Jacobin sentiments and the few slaves were incited to agitate for their freedom. Spain could not rely on such a population to defend her interests in the event of war. It was a situation where Spain reigned but France governed. It was with such a precarious population balance and paucity of Spanish troops that the British were able to seize the island reportedly without a shot being fired. The inadequate Spanish militia went into hiding at the sight of the British show of strength.[14] The Spanish failure to maintain Trinidad seems not only to stem from their fanatical interest in "El Dorado", but also the tendency of Spain to colonize on too large a scale. Donald Wood points out that:

> During the Spanish rule it had been a forgotten and neglected island in an Empire which stretched from the Guadalquivir to the Phillipines and which contained far richer and more important countries.[15]

The obvious result of this was a tendency for Spanish resources and manpower to be spread out rather thinly over such a vast empire.

The British officially took control of the island in 1797, but since the 1780's there was an influx of French planters, fleeing the

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[13] Ibid., p. 33 and Barbara Hill, p. 41.

[14] Williams, op. cit., pp. 49-50.

[15] Donald Wood, Trinidad in Transition (London, 1968), p. 30.

revolutions in Haiti and France and others who refused to live under British rule in nearby islands like Grenada and Dominica. These planters were to form the nucleus of economic activity in Trinidad as they began cultivating cacao, coffee and sugar. Thus, when the British captured the island in 1797, they found new and fully developed sugar plantations in full progress.[16] Total production in that year amounted to 7,800 hogsheads of sugar, the product of 159 estates; 330,000 lbs. of coffee, the product of 130 estates; 96,000 lbs. of cocoa, the product of 60 estates; and 224,000 lbs. of cotton, the product of 103 cotton estates.[17] Trinidad was destined to become an important trading center with Great Britain. At this time the leading sector of the economy had again become cocoa. Indeed, cocoa was king, and by 1818 the governor was emphasising that it was only by encouraging its growth that the island could be settled. Cocoa exports increased from 96,000 lbs. in 1797 to 3,090,526 lbs. in 1833.[18] The basis of the economy was its export trade and the principal export commodity became cocoa. But its reign was destined to be erratic as usual. A combination of bad harvests and unfavourable price movements created hardships among planters. Although output had increased to over 3 million pounds, exports had dropped by 1 million pounds and the consequent decline in revenue was sufficient to cause abandonment of half the trees and several estates.[19] But there was sugar to fall

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[16] Frances Armytage, The Free Port System in the British West Indies (London, 1953), pp. 5-6.

[17] Williams, op. cit., p. 48.

[18] Ibid., p. 80.

[19] Carmichael, op. cit., p. 175, 237.

back on. However, slavery and sugar went hand in hand, and by 1807, the British had abolished the slave trade, but not slavery.[20] On the other hand, cocoa being a tree crop, and therefore requiring lighter work could ostensibly be cultivated with white labour.[21] Herein lies the reason for the failure of Trinidad's sugar to yield the revenue that it was yielding for its neighbours to the north. Sugar is more labour-intensive than cocoa, so that with a general shortage of slave labour in the island, the industry's output could not reach that of say, Barbados, an island that is a mere one-tenth the size of Trinidad.[22] Cocoa is land-intensive but not comparatively labour-intensive, so that it was more suitable for cultivation in Trinidad, given the existing labour situation. Whereas cocoa output and exports increased nearly forty times between 1797 and 1833, sugar output and exports less than doubled between 1812 and 1833.[23] In the same period, rum exports which are a by-product of sugar, plunged from 39,126 gallons to 223 gallons.[24]

When slavery was abolished in 1833, the plantocracy advocated economic development via sugar and as such required labour in large quantities. Being influential people themselves, the plantocracy had

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[20]For good accounts of the economics of sugar and slavery see Eric Williams, Capitalism and Slavery (Chapel Hill, 1944), pp. 3-29, particularly p. 19; R. Guerra Y. Sanchez, Sugar and Society in the Caribbean (New Haven, 1964); and Celso Fortado, The Economic Growth of Brazil (Los Angeles, 1965), pp. 24-33.

[21]Carmichael, op. cit., p. 54.

[22]Sir Alan Burns, op. cit., p. 629, shows that at emancipation, Barbados had over 4 times as many slaves as Trinidad.

[23]Williams, The History of the People, op. cit., p. 79.

[24]Ibid., p. 79.

the British government enact a period of apprenticeship, which to the slaves was a diabolical attempt to prolong slavery.[25] Their reaction was to withhold their labour from the planters, who had to turn to India for a solution. The situation created by the emancipation of the African and the inadequacy of the white worker, put the planter back one hundred years--he needed labour as he did then. Being deprived of his African, given the inadequacy of white labour and native indian labour, he turned to the Indian from the east, and Trinidad imported 145,000 East-Indians between 1845 and 1917.[26] Sugar came into the fore in the 1840's, but could neither compete with German beet sugar nor the comparatively advanced factory technology of Cuban cane sugar. When Britain adopted a free trade policy, in an attempt to buy in the cheapest market, the Caribbean sugar industry felt the repercussions, as German beet sugar benefited. Brief respite was found in the U.S. market, but they too abandoned British Caribbean sugar, as Cuban sugar acquired a privileged position in their market.[27]

Unlike some of the other Caribbean islands, Trinidad had cocoa to switch to, and a new commodity in petroleum was later to become of importance. At any rate, as late as 1913, Trinidad could be described as an agricultural economy. The following table shows the principal exports for that year. It is to be noted that cocoa almost completely dominated the export trade of the economy with exports of some 48 million lbs. and export earnings of $6.7 million. Indeed, the period

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[25] Ibid., pp. 88-89.

[26] By the same author, Capitalism and Slavery, op. cit., p. 28.

[27] Williams, The History of the People, of Trinidad and Tobago, op. cit., pp. 152, 156-159, and Furtado, op. cit., p. 152.

from 1870-1920 has been described as the Golden Age of cocoa.[28] In the 1920's it was again struck by the destructive "witch's broom" disease and faced with the stiff competition of a new entrant into the cocoa producing business in Ghana.[29] The industry never fully recovered, and proof of this is seen in the fact that output in 1968 was a mere 14 million lbs., with export earnings of $8 million.[30]

TABLE I

PRINCIPAL EXPORTS OF TRINIDAD-TOBAGO 1913

Commodity	Units	Quantity	Value $TT
Cacao	lbs.	48,116,377	$6,735,825
Coconuts	nuts	16,390,897	409,771
Copra	lbs.	1,154,539	55,416
Fruit	...	.....	56,611
Molasses	gal.	339,496	20,366
Rum	gal.	102,323	51,153
Sugar	lbs.	73,147,200	2,006,721
Asphalt, crude	lbs.	418,868,800	920,275
Asphalt, epure	lbs.	43,503,040	186,436
Bitters	gal.	32,234	154,723
Petroleum, crude	gal.	13,570,152	360,096

Source: Watson Griffin, Canada and the British West Indies report on Possibilities of Trade under the preferential tariff agreement (Ottawa, 1915), pp. 120-121.

Petroleum has since the late 1920's become the dominant factor in the country's economic growth and development. Exports have grown

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[28]Roland Gill, "Trinidad's Oil Industry", The Caribbean, Vol. II, August, 1957, No. 1, (Port-of-Spain, Trinidad, 1957), p. 2.

[29]Macpherson, op. cit., p. 61.

[30]C.S.O. Government of Trinidad and Tobago, Annual Statistical Digest 1968 (Port-of-Spain, 1968), p. 108; also Table II.

from $560,096 in 1913 to $724,458,000 in 1968.[31] Actually the first attempts to find oil in Trinidad were undertaken in 1857, two years before the world's first well in Pennsylvania, U.S.A., but lack of capital caused the project to be postponed. Further attempts at exploration were reported in 1867, but were also poorly financed. Finance was not the only problem; there was then the inaccessibility of the dense tropical forests of south Trinidad, where no roads had been constructed; the prevalence of diseases and the scarcity of the necessary industrial skills. 1909 has generally been noted as the year that the industry started and the recorded output of that year was put at 47,000 barrels. It seems that Sir Winston Churchill's decision to convert the British Navy from coal to oil firing gave the Trinidad oil industry the stimulus that it needed. By 1938, Trinidad had become the British Empire's largest crude oil producing country.[32] Thirty years later petroleum and petroleum products still dominated the economy with cocoa and sugar reduced to the role of appendages to a basically mineral-staple economy.

In retrospect of Trinidad's economic history, there is a marked tendency for leading sectors to replace each other. Tobacco, cocoa, sugar, cocoa, petroleum with sugar, all had the honor in that order. This, however, does not detract from Professor Myint's argument that export economies cannot easily switch from one line of experts to another.[33] Indeed, Myint's point that an underdeveloped economy is

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[31]Table I and ibid., p. 126.

[32]Roland Gill, op. cit., pp. 1, 3.

[33]H. Myint, The Economics of Developing Countries (London, 1967), p. 148.

likely to be more seriously affected by fluctuations in world market prices, is well demonstrated by Trinidad's experience. The transitional process of moving from one leading sector to another was, as we have seen, painful. The gestation period from the planting stage to the reaping stage in some agricultural products is quite long. Cocoa, for instance requires some 3-5 years. There is no doubt that in the past, as at present, in the economy of Trinidad and Tobago, "staple exports are the leading sector of the economy and set the pace for economic growth". But as Professor Watkins went on to point out, the spread effects must be potent, so that the domestic sectors will grow with export growth. What is crucial is the ability to transform, which requires resource flexibility and innovation, sufficient to permit shifts into new export lines or into production for the domestic market.[34] It is seen that in order that export growth can lead to development, there must be a favourable man/land ratio and an absence of inhibiting traditions. With these positive criteria, economic development "will be a process of diversification around an export base".[35] This implies that the stimulus of exports must be sufficiently strong to cause the rest of the economy to respond effectively. But there are many obstacles to this response. To name a few; the size of the domestic market may be too small to permit internally sustained growth; the soil and climate may hinder certain types of economic activity and may determine the nature of the resource base; and indeed,

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[34] Melville H. Watkins, "A Staple Theory of Economic Growth", The Canadian Journal of Economics and Political Science, Vol. XXIX, No. 2, May, 1963 (Toronto, 1963), pp. 144, 149.

[35] Ibid., p. 144.

there may be inhibiting traditions and attitudes towards hard work. If these factors are present, then what may happen is the pattern of growth whereby the export sector and industries grow and develop into enclaves, with little or no effect on the rest of the economy. Growth will therefore, be unbalanced, and will not necessarily be accompanied by development.[36]

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[36]Arguments in this vein for the Caribbean are found in William G. Demas, The Economics of Development in Small Countries, with special reference to the Caribbean (Montreal, 1965), pp. 101-103 and more recently, A.A. Francis, "National Income Growth under Perfect Enclavism", Social and Economic Studies, Vol. 18, No. 4 (Iser, 1970). This type of distinction has not been the subject of much discussion in the literature of the Economics of Development.

CHAPTER II

THE GENERAL DEVELOPMENT PROBLEM AND THE STRUCTURE OF TRADE 1928-1968

The General Development Problem

Economic development in the Caribbean became an important issue after investigations into major disturbances that had swept through the area in 1937.[1] Because of chaotic labour-management relations, a simple labour dispute became the catalyst for a popular revolt which started in Trinidad, and spread to Guyana, Jamaica, the Wimward Islands and Barbados.[2] In conclusion of their investigations, the Royal Commission pointed out two of the prime causes of the revolt as:

> (1) that the true origin of the disturbances must be traced to the more or less general sense of dissatisfaction for which there was no adequate means of articulation through recognized machinery of collective bargaining;
>
> (2) that this sense of dissatisfaction reached its culminating point when, the cost of living having risen, the earnings of the work people were not adjusted with sufficient promptitude to offset its effect;[3]

The recommendations of a later commission led to the passage of the Colonial Development and Welfare Act in 1940, which made special

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[1] Annette Baker Fox, Freedom and Welfare in the Caribbean, A Colonial Dilemma (New York, 1949), p. 31.

[2] For a complete account see H.M.S.O., Trinidad and Tobago Disturbances 1937: Report of the Royal Commission (London, 1938) Cmd.5641.

[3] Ibid., p. 81.

provision for financial aid to the West Indies.[4] Specialization or concentration on a single crop for export was spurned, as economic experience had shown the lack of wisdom in such a policy.[5] It was recommended that there be increased preference and higher quota for West Indian sugar in the London market. The war years, however, made this an unbearable burden for Britain. But, the second phase of their recommendations which was concerned with "more intensive utilization of local resources" was made good. This involved a replacement of the common practice of shifting cultivation, more diversified farming, including animal husbandry and a "comprehensive approach to agricultural reform which embraced all aspects of rural life from education to provision for rural amenities".[6]

There was, however, much criticism, particularly by Professor W. Arthur Lewis, of a welfare programme based on agriculture as was recommended, given the dense population of the region. In two articles,[7] Lewis set out an approach to the development of the area based on what has been popularly called "Industrialization by invitation". Much of Caribbean economic strategy during the post

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[4]Fox, op. cit., p. 31.

[5]H.M.S.O., West Indies Royal Commission Report (London, 1945), p. 41.

[6]Fox, op. cit., pp. 48-49.

[7]W. Arthur Lewis, An Economic Plan for Jamaica, mimeo 1944 and The Industrialization of the British West Indies, Caribbean Economic Review, Vol. II, No. 1, May, 1950, sets out the new approach in some detail. The latter closely resembles the more well known Economic Development with Unlimited Supplies of Labor, The Manchester School, May, 1954, in that it stresses negligible, or zero marginal productivity of labour and recommends its absorption by the "capitalist" modern sector.

war years, and even today, reflects Lewis' thinking. It is, therefore, instructive to examine Lewis' plan briefly in order to get a better insight into the problem of economic development in Trinidad and Tobago.

As a prerequisite to his plan, Lewis recommended that the entire area should be brought under a customs union. This, he felt would deter duplication of industries, since there were few industries in which the market of all the islands together could support more than a single factory. It was also recommended that the entire area be brought under a political federation with freedom of movement of labour. The argument ran that if the markets of the lesser developed regions were to be reserved to industrialists located in the more developed regions, then the surplus labour of the former had the right to freely seek work in the latter.[8] The case for rapid industrialization, he argued, rested in the fact that the islands were already over-populated and carried a much larger population than agriculture could absorb.[9] In other words, the man/land ratio was already too unfavourable to make further employment in agriculture productive. Half of the agricultural labour force had to be reduced if agriculture was to yield a decent standard of living. But there was no question of a choice between agriculture and industry. If agriculture could absorb more people without reducing output per head, so much the better. What was preferable was a programme of industrial

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[8] W. Arthur Lewis, "The Industrialization of the British West Indies", Caribbean Economic Review, Vol. II, No. 1, May, 1950, (Trinidad, 1950), pp. 30, 39-40, 44-45.

[9] Ibid., p. 1.

development as an essential part of a programme for agricultural improvement. However, Lewis recognized that the approach had to be modified to suit special situations. Trinidad did not, then, nor has it now had overcrowding in agriculture.[10]

The type of industry that was suitable for the area had to reflect the small size of the area's market. An example from Professor Ragnar Nurkse illustrates this type of problem. One must agree that, it is a doubtful proposition to establish a modern shoe factory in a country where the majority of people are too poor to wear leather shoes; the market is too small. It is also well known that many articles that are in common use in the U.S. can be sold in a developing country in quantities so limited that a machine working only a few days or weeks can meet a year's demand, and would have to remain idle for the rest of the time. A case in point is Chile, where it was found that a modern rolling mill, which is standard equipment in any industrial country, can produce in three hours a sufficient supply of a certain type of iron shapes to last the country for a year. In other words, the inducement to install such equipment is small.[11] This problem is compounded in the Caribbean context by the particularly tiny size of the market, and a relative scarcity of raw material inputs. In this respect, the industries which were considered favourable had to be of high labour intensity, low capital intensity and low import intensity. A sampling of such industries

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[10] Ibid., pp. 2-3, 6-7.

[11] Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries (New York, 1967), p. 7.

included: boots and shoes, textile packing, watches, and sport goods--in a word, light manufacturing.[12]

The incentives necessary to attract these 'favourable' industries were to be such generous concessions as, temporary monopoly rights, or subsidies, tax holidays and tariff protection.[13] It was felt that market demand would be provided by the islands themselves plus attempts would be made to gain a share of markets in Latin America, North America, and the U.K.[14] Most important of all, the employment target over the next ten years (i.e. 1950-1960) was put at 120,000 jobs. The industries that were earmarked to provide these jobs ran the spectrum of light industries from hosiery manufacture to the manufacture of pens and pencils.[15] However, it was not clearly stated how the jobs would be distributed among the islands, but heavy emphasis was made on Jamaica, Trinidad and to a lesser extent Barbados. Roughly speaking, this would mean Trinidad's share should be somewhere between 30,000-40,000 jobs.

Unfortunately, the Lewis prerequisite criteria were not established with the intensity that Lewis desired. The political federation lasted three years; the customs union remained a matter of academic discussion; and therefore the movement of labour was

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[12]Lewis, op. cit., p. 26.

[13]Lewis recommended Puerto Rico as an "intelligent" model, p. 52. He further theorized that if the local people are thrifty, they can build up savings which in due course would enable them to go into business themselves once they have learned the "tricks of the trade" from foreign companies, p. 39.

[14]Ibid., pp. 30, 37.

[15]Ibid., pp. 11, 26.

restricted. Trinidad and Tobago and Jamaica sought and obtained independence in 1962 outside of the federation. Nevertheless the Lewis doctrine was by then well entrenched. In 1950, the Trinidad government had enacted the Aid to Pioneer Industries Ordinance and had set up an Economic Advisory Board two years earlier.[16]

Statistically, the Trinidad economy has performed exceedingly well in many areas, yet some nagging structural problems have highlighted its underdeveloped nature. On the bright side, the real gross domestic product increased at an annual rate of 8.5 per cent per year between 1951 and 1961, so that production in 1961 was at a level more than double what it was in 1951. Real per capita national income increased from $586 in 1951 to $1,068 in 1966.[17] Government revenue increased from $130 million in 1958 to $274.5 million in 1967 alone.[18] And gross employment increased from 252,000 in 1960 to 315,400 persons in 1968.[19] On the gloomy side, the principal structural problems hindering internally generated development were described as:

(i) a (lack of) diversification of the structure of production which hinders internally-generated process of growth in agriculture, fisheries,

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[16]Eric Armstrong, Import Substitution in Jamaica and Trinidad and Tobago, University of the West Indies (Jamaica, 1967), p. 2.

[17]Frank B. Rampersad, "Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-1961", C.S.O. Research Papers, No. 1, 1963 (Trinidad, 1963), p. 92; ibid., p. 170 and C.S.O. Annual Statistical Digest 1967 (Trinidad, 1968), p. 113.

[18]Annual Statistical Digest, ibid., p. 118.

[19]Government of Trinidad and Tobago, Draft Third Five-Year Plan 1969-1973 (Trinidad, 1969), p. 176. This definition also includes persons who at the time of the survey could not work, were temporarily ill, or knew of no suitable jobs.

manufacturing and tourism, irrespective of adverse or favourable developments in the petroleum sector of the economy;

(ii) structural unemployment;

(iii) the need to shift the centre of decision-making investment, production, employment, management and marketing from overseas controlled to locally controlled institutions.[20]

The petroleum sector overtook agricultural exports in 1930 and has since maintained its position as the leading export commodity. Whereas in 1930 it accounted for 46 per cent of exports and earned $10.6 million, in 1968 it was responsible for 78 per cent and earned $724.5 million (see Table II). Since exports constitute a high proportion of national income and product, this means that if the rate of growth of petroleum exports should be checked, these aggregates would tend to be affected similarly. The other two important export commodities throughout the period, cacao and sugar, have experienced fluctuations both in their export earnings and level of production. Cacao is yet to regain its production levels of the 1920's. Unlike sugar, it is sold on the open market so that when prices are high estates are worked vigorously, but when the price falls, improvement programmes are interrupted and cultural expenses are reduced.[21] The result is that long term cost of production is as high as the average price of cocoa; wages cannot be improved so that labour cannot be attracted to the industry and management is complicated by excessive unmanageable acreages.[22] Sugar on the other

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[20] Ibid., p. 5.

[21] A.L. Jolly, "The Future of Trinidad's Agriculture", The Caribbean, Vol. II, No. 2 (Port-of-Spain, 1957), p. 40.

[22] Ibid., p. 40.

hand, has been more fortunate in that it has had the protection of regulated international agreements and can rightfully boast of being "the most progressive agricultural industry technically in the Caribbean".[23] It is both highly capitalized and owned by large foreign concerns, whereas cocoa is controlled by individual domestic interests and co-ops.

Recently, the petroleum and sugar industry have managed to reduce per unit costs while more than doubling labour productivity by the use of more capital relative to labour[24] and have aggravated the unemployment problem. The petroleum sector has experienced a decline in rate of output of domestic crude and has resorted to increased importation of crude petroleum in order to increase and maintain its output. According to a recent study, profit in the petroleum industry declined from $105 million in 1961 to $76.6 in 1965.[25] The result is a general decline in employment in the industry. Sugar has also been inflicted by capital-intensive technology with its employment diverting sequel as noted above. Other manufacturing, on the other hand, has not lived up to Lewis' expectations; partly because the prerequisite criteria collapsed, and partly because relatively more capital-intensive industries have been attracted by

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[23] _____, "Aspects of Progress: Agriculture", The Caribbean, Vol. 10, No. 4 (Port-of-Spain, 1956), p. 80.

[24] Havelock Brewster, Wage-Policy Issues in an Underdeveloped Economy: Trinidad and Tobago (I.S.E.R. Jamaica, 1967), pp. 61, 64.

[25] T. Ainsworth Hazewood, The Caribbean Mineral Economy: The Case of Trinidad and Tobago 1951-1965, Unpublished Master's Thesis, (McGill University, 1969), p. 187.

the investment incentives. In Trinidad's case, up to 1966 a mere 6,031 jobs were created at an average cost of $33,444 per job.[26] To complicate matters, the labour force has been growing at unmanageable rates. The following quote from the Head of the Economic Planning Commission couches the unemployment problem neatly:

> The genesis of the unemployment problem in the Caribbean is the high rate of growth of the labour force (currently 2.4 per cent per annum in Trinidad and Tobago) combined with the capital-intensive nature of modern technology. This is the simple but fundamental explanation and is of course not peculiar to the Caribbean. Not only have capital-intensive processes characterized many new industries, but labour-saving devices have been introduced into major existing industries--especially petroleum and sugar, where employment has actually declined in recent years.[27]

In regard to foreign ownership in the Trinidad economy, the sugar industry is wholly owned by foreign capital, the petroleum industry,[28] much of manufacturing industry and almost all major financial institutions including insurance companies and commercial banks. American capital dominates in the petroleum and processing industries; British capital controls the sugar industry and is also

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[26]Armstrong, op. cit., pp. 9, 12. At the beginning of 1966, there were 123 "pioneer" industries employing an average of 40 persons per establishment. A complete list of these industries from 1950 to 1966 are presented in ibid., pp. 19-32. Most of the industries are involved in the manufacture of chemicals, food products, machinery, metal and metal products, building materials and motor vehicle accessories. As such, they are highly mechanized. See also Edwin Carrington, "Industrialization in Trinidad and Tobago since 1950", New World Quarterly, Vol. IV, No. 2, pp. 37-43.

[27]Demas, op. cit., pp. 109, 111.

[28]The Trinidad Government acquired a 50/50 share in a small oil company jointly with the Tesoro Petroleum Corporation on July 1, 1969. The new company is the Trinidad Tesoro Oil Co. which formerly belonged to B.P. Ltd. The reported profits for 1969 amounted to $3.2 million. Trinidad Guardian, Dec. 31, 1969, p. 1.

present in manufacture and banking (the Barclays D.C.O. group) and Canadian capital dominates banking and insurance. The Bank of Nova Scotia, Royal Bank of Canada and the Imperial Bank of Commerce together maintain at least 35 branches in the territory.[29] The main limitation of this state of affairs is that all important decisions about the economy are being taken by large international corporations, and government and domestic producers alike have very little real autonomy in determining the evolution of the economic life of the community.[30] This is by no means unique to Trinidad and the Commonwealth Caribbean. Osvaldo Sunkel has pointed out that this is a prime issue in the development plans of many Latin American countries.[31] The problem is especially tricky in regard to resource extracting industries, as some international companies through their experience in the industry have a preference for one type or quality of the resource over others. If the mineral that is found does not suit their preference, then they are not interested in developing it, although from a national standpoint it could be economically important if the appropriate

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[29] In this connection a quote from an empirical study is enlightening: "A proportion of the export earnings of the territory was also used by banks and financial houses for a regular export of capital. During most of the decade, banks increased their investment in the short-term money market in London; insurance companies invested only about 40 per cent of the net premiums in domestic assets, all the remainder of the net premiums were invested abroad. Only in . . . 1955 and 1958 did these financial institutions reverse the outflow, and the sums brought in amounted to $18 million. For the period as a whole, net investment abroad by banks and financial houses amounted to $56 million." F.B. Rampersad, "Some Aspects of the External Trade and Payments of Trinidad and Tobago 1951-1959", Social and Economic Studies, Vol. 12, No. 1, March, 1963 (Iser, 1963) pp. 119-120.

[30] Demas, op. cit., p. 61.

[31] Osraldo Sunkel, "National Development Policy and External Dependence in Latin America", The Journal of Development Studies, Vol. 6, No. 1, Oct. 1969 (London, 1969), p. 25.

technology were developed domestically. But the dilemma countries like Trinidad find themselves in, must take cognizance of the fact that foreign capital is useful, whatever the politics, in accelerating growth and thereby raising living standards more rapidly. Principally because foreign capitalists have access to established foreign markets, because they have the know how and expertise that domestic industries lack, and because they have access to larger and varied capital resources, such aid is generally essential.

In Trinidad this aid has been essential for precisely these reasons, in addition to historical circumstances and the problem posed by capital formation. Because of the country's high rates of growth and high level of per capita income, it has become difficult to increase net foreign borrowing adequately or at acceptable terms from international agencies, since the criteria used by these agencies emphasize per capita income and growth rates.[32] On the other hand, it would seem that the only solution is to restrain and limit consumption, but this has not been accomplished. The proportion of consumption to national income has been consistently high, as is seen in Tables XXI and XXXIII.

The Structure of Export Trade

In discussing the structure of export trade and the general importance of the external sector of the economy as a whole, a summary note would perhaps explain the country's circumstances. As pointed out previously, Trinidad, like all Commonwealth Caribbean countries,

[32]D.J. Morgan, Aid to the West Indies (London, 1964), pp. 26-27.

has a small economy. This complicates the development problem because it means that natural resources will tend to be highly skewed. Again, the small land area restricts agriculture especially since these islands are in the tropics and can, therefore, produce tropical agricultural products, which can often be more cheaply produced in larger tropical regions. Only Guyana, Jamaica and Trinidad and Tobago possess any mineral resources of economic significance, while among them only Guyana has a potential source of hydro-electric power.[34] On the other hand, it has been pointed out that:

> From the supply side alone, sustained economic advance in the Commonwealth Caribbean depends on the ability of the territories in the area to draw upon overseas supplies of the wide variety of imports that are required in the course of transformation and growth. But no less strategic in the role of foreign trade in overcoming the constraints on demand which results from the small size of the domestic markets. External trade thus serves as the main vehicle for economic progress.[35]

Table II below attempts to give an overall picture of export trade for the period under review. It is at once noticeable that exports can be divided into two basic categories; mineral and agricultural. Petroleum and Asphalt on the mineral side and Cocoa, sugar and Copra on the agricultural side. Throughout the period, there was a steady decline in agriculture's share of exports. Initially accounting for 53.61 per cent of exports, at the end of the period its share dropped to a mere 5.74 per cent. Petroleum exports, on the other hand had more than doubled from 35.79 per cent in 1928 to

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[34] Alister McIntyre, "Some Aspects of Development and Trade in the Commonwealth Caribbean", Economic Bulletin for Latin America, Vol. X, No. 2, October, 1965 (New York, 1965), p. 127.

[35] Ibid., p. 127.

TABLE II

VOLUME OF EXPORTS OF MAJOR COMMODITIES 1928-1968 SELECTED YEARS
(Thousands TT dollars + percentages)

Year	Cocoa	Sugar	Bitters	Rum	Asphalt	Copra	Petroleum & Products	Total Exports
1928	7,925 28.73%	5,764 20.91%	336 1.20%	58 0.02%	1,934 7.04%	1,094 3.97%	9,869 35.79%	27,576 100%
1929	6,941 24.40%	5,040 17.72%	420 1.48%	65 0.02%	2,074 7.29%	1,008 3.54%	11,707 41.15%	28,450 100%
1930	5,453 23.73%	3,725 16.21%	182 0.79%	69 0.30%	1,502 6.54%	845 3.68%	10,589 46.07%	22,982 100%
1931	3,965 22.40%	4,334 24.31%	130 0.73%	75 0.42%	1,138 6.38%	485 2.72%	7,166 40.20%	17,827 100%
1932	2,779 15.76%	4,061 23.05%	91 0.51%	132 0.75%	634 3.59%	437 2.48%	8,933 50.67%	17,630 100%
1933	2,669 15.61%	5,357 31.33%	101 0.59%	61 0.36%	725 4.24%	398 2.33%	7,162 41.89%	17,098 100%
1934	1,680 9.28%	4,397 24.28%	140 0.77%	53 0.29%	797 4.40%	274 1.51%	9,926 54.83%	18,106 100%
1935	2,530 12.81%	4,522 22.90%	134 0.68%	13 0.07%	979 4.96%	168 0.85%	10,310 52.21%	19,747 100%
1936	2,342 9.67%	6,130 25.31%	76 0.31%	93 0.38%	792 3.27%	250 1.03%	13,205 54.52%	24,221 100%

TABLE II--Continued

Year	Cocoa	Sugar	Bitters	Rum	Asphalt	Copra	Petroleum & Products	Total Exports
1937	3,086 11.09%	6,115 21.97%	112 0.40%	86 0.31%	1,013 3.64%	542 1.95%	15,211 54.64%	27,840 100%
1938	2,371 7.96%	4,958 16.64%	115 0.39%	53 0.18%	787 2.64%	192 0.64%	19,718 66.17%	29,798 100%
1939	1,214 4.55%	5,088 19.05%	96 0.36%	96 0.36%	840 3.14%	187 0.70%	17,755 66.47%	26,712 100%
1945	1,080 5.77%	4,392 23.45%	437 2.33%	1,387 7.41%	197 1.05%	278 1.49%	7,685 41.03%	18,730 100%
1946	1,171 2.53%	6,571 14.19%	494 1.07%	1,210 2.61%	7,536 1.63%	--- ---	30,413 65.66%	46,315 100%
1947	3,206 4.92%	8,088 12.42%	379 0.58%	1,810 2.78%	902 1.39%	--- ---	44,918 68.99%	65,107 100%
1949	4,519 3.27%	17,752 12.83%	408 0.29%	3,112 2.25%	4,849 3.50%	--- ---	97,328 70.33%	138,397 100%
1950	8,361 4.71%	17,900 10.08%	620 0.35%	2,065 1.16%	5,543 3.12%	257 0.14%	126,309 71.12%	177,592 100%
1952	8,240 3.69%	20,270 9.08%	--- ---	--- ---	8,310 3.72%	--- ---	168,810 75.59%	231,100 100%
1953	11,730 4.67%	26,070 10.38%	--- ---	--- ---	9,170 3.65%	--- ---	186,880 74.37%	257,600 100%

TABLE II--Continued

Year	Cocoa	Sugar	Bitters	Rum	Asphalt	Copra	Petroleum & Products	Total Exports
1954	15,110	28,510	---	---	11,670	---	183,690	262,900
	5.87%	11.08%	---	---	4.54%	---	71.41%	100%
1955	11,820	31,270	---	---	9,480	---	205,110	278,120
	4.25%	11.24%	---	---	3.41%	---	73.75%	100%
1956	10,540	25,670	---	---	8,760	---	255,180	321,360
	3.28%	7.99%	---	---	2.73%	---	79.41%	100%
1957	8,610	33,690	---	---	9,870	---	305,940	356,190
	2.42%	9.46%	---	---	2.77%	---	85.89%	100%
1958	12,748	30,355	---	---	1,800	---	339,945	425,300
	3.00%	7.14%	---	---	0.42%	---	79.93%	100%
1959	10,064	32,059	---	---	2,122	---	363,754	459,400
	2.19%	6.98%	---	---	0.46%	---	79.18%	100%
1960	8,717	36,395	---	---	2,327	---	392,612	490,800
	1.78%	7.42%	---	---	0.47%	---	79.99%	100%
1961	6,496	42,376	---	---	2,661	---	493,918	593,400
	1.09%	7.14%	---	---	0.45%	---	83.24%	100%
1962	8,004	33,492	---	---	3,024	---	494,343	591,900
	1.35%	5.66%	---	---	0.51%	---	83.52	100%
1963	8,563	49,754	---	---	3,282	---	526,179	641,471
	1.34%	7.76%	---	---	0.51%	---	82.03%	100%

TABLE II--Continued

Year	Cocoa	Sugar	Bitters	Rum	Asphalt	Copra	Petroleum & Products	Total Exports
1964	4,878	47,951	---	---	4,093	---	574,245	699,907
	0.01%	6.85%	---	---	0.58%	---	82.05%	100%
1965	4,282	42,436	---	---	3,158	---	563,726	691,275
	0.01%	6.14%	---	---	0.46%	---	81.55%	100%
1966	4,264	38,084	---	---	3,640	---	582,050	736,007
	0.01%	5.17%	---	---	0.49%	---	79.08%	100%
1967	5,498	37,870	---	---	3,400	---	594,403	765,777
	0.01%	4.95%	---	---	0.44%	---	77.62%	100%
1968	8,072	45,440	---	---	3,208	---	724,458	932,502
	0.87%	4.87%	---	---	0.34%	---	77.69%	100%

Sources: U.K.S.O., Statistical Abstract for the British Empire 1928-1937, Cmd. 5872 (London, 1938).
_____, Statistical Abstract for the British Commonwealth 1938-1939 and 1945-1947, Cmd. 8051, (London, 1950).
_____, An Economic Survey of the Colonial Territories 1951, The West Indies and American Territories, Colonial No. 281-4 (London, 1953).
United Nations, Yearbooks of International Trade Statistics, 1955, 1956, 1957, 1960 (New York).
_____, Commodity Trade Statistics 1968, Series D, Vol. XVIII, No. 1-32 (New York, 1968).
Max B. Ifill, ed., Caribbean Economic Almanac 1964-1966 (Trinidad, 1964).
Government of Trinidad and Tobago Central Statistical Office, Annual Statistical Digest, 1967 (Trinidad, 1968).
_____, Quarterly Economic Report April-June 1969 (Trinidad, 1969).

The years 1928-47 were converted from sterling at £1 = $4.80

77.69 per cent in 1968. In the latter case, its export earnings showed a fair degree of fluctuation between 1928 and 1945. For example, petroleum exports in 1945 were far below that of 1928, as it was for the rest of the economy. Indeed figure 1 shows that the period 1928 to 1939 was one of stagnation in the external sector as a whole.[36] There was slight improvement in 1940, but throughout the war years there was a balance of trade deficit which persisted until 1948. Of Cocoa, it is known that the era was one of decline due to crop failures and falling prices that left many estates bankrupt, hence production was affected.[37] Copra has also shown a steady decline, as it too was affected with crop diseases which forced a reduction in the acreage and thus output also.[38] This particular commodity has declined to the extent that it has ceased to be an item of export since 1960,[39] and in 1967 there were net imports of $1,004,482 of Copra.[40] Sugar, on the other hand, has benefited from preferential assistance following the report of the Olivier Commission (Cmd. 3517). As well, cost reduction had been effected through greater efficiency.[41] Even so, its output through 1928-1939 was far from steady as Table III shows. Petroleum among the three items has shown the most consistent and steady increase with somewhat less fluctuation in output. The

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[36]No doubt this reflects the world depression that followed the great crash of 1929.

[37]H.M.S.O., Trinidad and Tobago Disturbances, op. cit., pp. 16-17.

[38]Ibid., p. 20.

[39]Annual Statistical Digest, op. cit., p. 105.

[40]C.S.O., Overseas Trade 1967 (Trinidad, 1968), p. 32.

[41]H.M.S.O., West Indies Royal Commission 1945, op. cit., pp. 25-26.

growing air craft demand and the onset of war are attributable in this case.[42]

TABLE III

PRODUCTION OF CHIEF DOMESTIC EXPORT COMMODITIES
1928-1947 SELECTED YEARS

Years	Sugar Th. Cwt.	Cocoa Th. Cwt.	Petroleum Mill. Gall.
1928	1,482	518	168.3
1929	1,630	553	211
1930	1,383	481	191.6
1931	1,721	511	208.4
1932	1,719	373	223.4
1933	2,170	458	176.9
1934	1,870	239	216.3
1935	2,114	396	264.6
1936	2,853	253	323
1937	2,855	234	354.5
1938	2,405	379	441
1939	2,287	150	359
1945	1,187	69	118
1946	1,739	59	424
1947	1,791	80	498

Source: H.M.S.O., Statistical Abstract, Cmd. 5872, op. cit., pp. 296-297.
_____, Statistical Abstract, Cmd. 8051, op. cit., p. 215.

Cocoa Exports 1928-1968

From the beginning of the period, Trinidad's cocoa, on account of high quality and efficient methods of preparation, obtained a premium price over that of the more prolific producers like Brazil, Gold Coast and Nigeria.[43] However, since the onset of crop diseases

[42]Roland Gill, op. cit., p. 5.

[43]H.M.S.O., Trinidad and Tobago Disturbances, op. cit., p. 18.

in the initial year of the period, finer grades have given way to poorer ones.[44] There has been, however, positive action on the part of government with the establishment in 1945 of the Cocoa Subsidy Scheme.[45] The aim of the scheme was to aid in the replanting of the existing cocoa fields with high yielding plants, the provision of seedling, and in areas unsuitable for cocoa, an inducement for alternative crops.[46] It appears that these high-bearing clones were noted for their disease resistance as well.[47] By 1950, as is shown in Table II exports earnings had exceeded the 1928 level. However, it must be pointed out that even in 1958, in spite of the highest export earnings of the period, production is yet to regain the high level as obtained at the beginning of the period. For instance, in 1928 according to Table III, output stood at 518 Th. Cwt. or 58,016,000 lbs., whereas in 1958, the best export year output was only 20,240,000 lbs.[48] It would appear from this that the price variable was the dominant factor in the difference in export earnings as it is in so many other agricultural export commodities. In general it can be said that when West African output is plentiful, prices tend to be generally low.[49] Peak post-war production in

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[44] Ibid., p. 18.

[45] Clive Y. Thomas, "Projections of Cocoa Output in Grenada, Trinidad and Jamaica, 1960-1975", Social and Economic Studies, Vol. 13, No. 1, March, 1964 (I.S.E.R. 1964).

[46] Colonial Office, An Economic Survey of Colonial Territories, op. cit., p. 203.

[47] Ibid., p. 203.

[48] See Table IV.

[49] Ghana and Nigeria together produce more than ⅔ world output of cocoa, Table V and Commonwealth Economic Committee, Plantation Crops: A Review (H.M.S.O., 1964), p. 127.

TABLE IV

PRODUCTION OF CHIEF DOMESTIC EXPORT COMMODITIES
1949-1968

Years	Sugar '000 Tons	Cocoa '000 Lbs.	Petroleum 000 Bbls.
1949	159	12,832	1,035[b]
1950	146	16,198	1,006[b]
1951	141	19,000	20,843
1952	137	14,300	21,474
1953	153	21,650	22,336
1954	173	15,890	23,630
1955	193	18,848	24,896
1956	160	21,498	25,185
1957	168	22,059	34,063
1958	188	20,240	37,355
1959	181	17,395	40,919
1960	218	18,701	42,357
1961	246	15,498	45,863
1962	201	16,267	48,876
1963	227	16,143	48,678
1964	227	10,778	49,731
1965	251	10,947	48,859
1966	206	11,941	55,603
1967	198	11,648	64,994
1968	240	14,500	67,000

Sources: Colonial Office, Economic Survey of Colonial Territories, op. cit., p. 216.
C.S.O., National Income of Trinidad and Tobago 1951-1961 (Port-of-Spain, 1962), p. 29.
_____, National Income of Trinidad and Tobago 1952-1962 (Port-of-Spain, 1964), p. 28-29.
_____, Annual Statistical Digest 1967 (Port-of-Spain, 1968), pp. 102, 110.
Gov't of Trinidad and Tobago, Draft Third Five Year Plan 1969-1973 (Port-of-Spain, 1969), pp. 220-271.

Notes: 6. mill. galls.

Trinidad was realized in 1957 with an output of 22,059,000 lbs. and since then there has been a remarkable decline with output dipping to 14,500,000 lbs. in 1968, which was an improvement on 1967. It has also been pointed out that, coupled with the decline in the production

of high quality cocoa, there has been a loss of reputation in the quality of Trinidad cocoa on the world market.[50] This no doubt has dampened the salutary effect of premium prices, though not eradicated them altogether.[51]

The World's Cocoa Exporters and Trinidad

Cocoa cultivation outside West Africa has been recent. But Trinidad has been cultivating the crop since the eighteenth century, which places her among the earliest producers. As far as production is concerned, there are two crops a year in producing areas north of the equator, with the first and main crop being gathered between September-October until January-February, while the smaller crop is gathered four months later. In the Southern Hemisphere, the second crop is often the main crop. Generally the beans are sold in ordinary or fine grades, with 90 per cent of the world's output being of the former. The West African producers and Brazil account for most of the ordinary grades, while Trinidad, Ecuador and Venezuela provide most of the fine grades.[52] Table V shows the exports of world producers in the post-war period. It is to be noted that the exports of all prolific producers without exception have had fluctuations throughout the period. It would appear that states of nature like crop failures and bad weather may be the cause as in most countries, in recent years, prices appear to be generally

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[50] Thomas, op. cit., p. 104.

[51] Table VI shows Trinidadian cocoa still earns higher per unit prices than some competitors.

[52] Ibid., p. 113.

TABLE V

WORLD'S EXPORTS OF COCOA 1947-1968

Continent and Country	Average 1947-51	Average 1952-56	1961	1962	1963	1964	1965
NORTH & CENT. AMERICA					METRIC TONS		
Costa Rica	4,188	8,113	10,214	11,947	9,471	9,225	6,763
Cuba	234	396	-----	-----	-----	-----	-----
Dominica	159	170	99	127	156	-----	-----
Dominican Republic	24,860	21,564	11,696	18,621	23,780	26,224	22,432
Grenada	2,397	2,290	2,341	2,197	2,872	2,080	2,998
Guadeloupe	61	163	95	111	121	60	21
Guatemala	255	337	529	256	337	230	597
Haiti	1,873	1,853	902	512	1,152	455	105
Honduras	-----	6	23	27	52	42	38
Jamaica	1,541	1,282	1,116	2,231	1,265	1,465	2,253
Martinique	44	121	108	105	133	5	-----
Mexico	2,051	2,512	5,475	12,066	18,088	3,362	9,308
Nicaragua	170	121	223	237	296	268	313
Panama	2,241	2,042	1,195	1,103	893	827	649
St. Lucia	294	272	234	245	267	106	17
Trinidad and Tobago	6,988	8,396	5,686	5,849	6,516	4,596	4,866
Total	47,360	49,640	40,000	55,700	66,400	49,100	50,500
SOUTH AMERICA							
Bolivia	-----	3	-----	2	17	-----	-----
Brazil	106,217	107,132	104,170	55,340	68,685	74,710	91,966
Ecuador	21,286	25,846	32,391	31,630	35,498	28,716	39,280
Peru	-----	42	-----	113	152	8	-----
Surinam	1	35	138	317	233	147	202
Venezuela	14,791	16,645	9,793	10,913	12,537	12,262	12,320
Total	142,290	149,700	146,490	98,320	117,120	115,840	143,770

TABLE V

WORLD'S EXPORTS OF COCOA 1947-1968

1961	1962	1963	1964	1965	1966	1967	1968
			METRIC TONS				
10,214	11,947	9,471	9,225	6,763	7,743	7,194	5,856
-----	-----	-----	-----	-----	-----	-----	-----
99	127	156	-----	-----	-----	-----	-----
11,696	18,621	23,780	26,224	22,432	25,943	23,928	25,266
2,341	2,197	2,872	2,080	2,998	2,251	2,469	1,787
95	111	121	60	21	32	1	2
529	256	337	230	597	474	266	-----
902	512	1,152	455	105	361	356	495
23	27	52	42	38	46	88	-----
1,116	2,231	1,265	1,465	2,253	1,524	606	1,456
108	105	133	5	-----	-----	-----	-----
5,475	12,066	18,088	3,362	9,308	8,443	6,112	5,881
223	237	296	268	313	225	348	129
1,195	1,103	893	827	649	438	396	379
284	245	267	106	17	259	65	123
5,686	5,849	6,516	4,596	4,966	4,792	4,701	5,989
40,000	55,700	66,400	49,100	50,500	52,700	46,800	47,900
-----	2	17	-----	-----	-----	-----	-----
94,170	55,340	68,685	74,710	91,966	112,498	114,351	75,815
52,391	31,630	35,498	28,716	39,280	32,208	45,023	65,072
-----	113	152	8	-----	-----	21	-----
138	317	233	147	202	139	75	55
9,793	10,913	12,537	12,262	12,320	11,795	12,447	14,401
46,490	98,320	117,120	115,840	143,770	156,630	171,920	155,340

TABLE V--Continued

Continent and Country	Average 1947-51	Average 1452-56	1961	1962	1963	1964	1965
ASIA							
Ceylon	2,347	2,834	2,668	2,398	2,538	1,944	1,438
Malaysia:							
West Malaysia	-----	9	70	105	116	207	363
Sabah	-----	-----	121	251	343	363	425
Indonesia	175	454	57	36	49	568	540
Total	2,520	3,290	2,920	2,790	3,050	3,080	2,770
AFRICA							
Angola	315	318	370	401	327	271	188
Cameroon	44,431	52,634	65,631	66,259	79,599	58,972	77,800
Comoro Islands	-----	40	42	28	50	46	33
Congo, Democratic Rep. of	1,897	2,981	5,030	5,990	5,839	5,194	4,470
Congo (Brazzaville)	2,024	42	739	629	898	934	697
Equatorial Guinea	15,511	17,345	20,209	25,181	31,017	35,858	27,656
Gabon	2,024	2,650	3,191	3,361	2,950	3,552	3,270
Ghana	234,721	224,154	411,855	427,979	411,056	387,626	501,916
Ivory Coast	48,530	65,115	88,467	101,018	99,728	124,261	126,409
Liberia	331	455	671	831	1,024	1,538	720
Madagascar	197	297	435	338	407	382	342
Nigeria	107,153	106,343	186,862	197,773	177,408	199,975	305,553
Sao Tome and Principe	7,743	8,259	10,347	10,610	9,238	8,661	8,854
Sierra Leone	1,212	2,131	2,837	4,781	3,305	3,175	2,980
Tanzania	-----	-----	4	22	24	50	40
Togo	3,405	8,725	11,534	11,079	10,261	13,488	17,153
Total	467,470	491,490	808,210	856,280	833,130	843,980	1,078,080
OCEANIA							
New Guinea and Papua	180	919	8,666	13,144	15,333	17,179	20,558
New Hebrides	593	826	617	663	811	384	515
Western Samoa	2,437	3,017	3,978	5,342	4,157	4,550	2,887
Total	3,210	4,760	13,260	19,150	20,300	22,110	23,960
WORLD TOTAL	662,800	698,900	1,010,900	1,032,200	1,040,000	1,034,100	1,299,100

Source: F.A.O.: Cocoa Statistics, Vol. 13, January, 1970 (Rome, 19

increasing. Trinidad on the other hand, because of the loss of reputation in its fine grade beans following the latest crop failure, has had to accept lower per unit prices as is shown in Table VI. However, at standard exchange rates they are higher than much of her competitors. The present acreage under cultivation in Trinidad is now approximately 70,000-80,000 acres which is much less than an estimated 122,310 acres of 1956.[53] It was felt that cocoa needed a massive injection of capital comparable with that of sugar. The proponents of this argument calculate that by bringing another 50,000 acres into cultivation, 10,000 jobs could be created and a contribution of from $15 million to $20 million can be made to the economy.[54] The obstacles to this type of approach lie in the fact that the industry is not rationalized. Allocating investment among the 8,000 farmers[55] may pose a problem in itself unless the industry's output decisions, cultivating techniques and quality control programmes can be centralized. It is also questionable whether 50,000 additional acres of land can readily be found for such a project. The country is tiny by any standards and thus land is a scarce factor and has competing uses.[56] The optimum economic use must therefore be made of all available land. Also, it is well known in Trinidad that the 'reserve

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[53] Draft Five Year Plan 1969-1973, p. 272 and C.Y. Thomas, op. cit., p. 102.

[54] A.L. Jolly, "The Future of Trinidad's Agriculture", op.cit., p.40.

[55] Draft Plan, p. 273.

[56] In size alone, forests cover 45% of all land area in Trinidad and very little of it is capable of sustaining agriculture. Even so, much of it is needed for proper drainage. See Gov't of Trinidad and Tobago, Five Year Development Programme 1958-1962 (Trinidad, 1958), p. 10.

TABLE VI

EXPORT UNIT VALUES OF COCOA IN SELECTED COUNTRIES 1962-1968

Year	Brazil U.S. cent	Cameroon C.F.A. franc	Ceylon Rupee	Dom. Republic Peso	Ecuador U.S. cent	Ivory Coast C.F.A. franc	Ghana New Cedi	Mexico Peso	Nigeria Pence	Trinidad Tobago TT cent	Venezuela Bolivar
1962	43.8	107.1	3.21	0.409	50.3	104.4	0.313	4.58	40.7	136.8	2.98
1963	51.0	112.6	3.18	0.468	55.8	113.1	0.332	4.86	43.8	131.4	2.60
1964	46.6	116.8	3.26	0.403	56.4	116.9	0.352	5.07	48.1	105.3	2.74
1965	30.1	94.0	3.09	0.283	48.7	86.3	0.272	4.49	33.5	88.0	2.76
1966	45.1	96.2	2.74	0.417	53.4	105.3	0.259	5.80	35.1	89.0	2.78
1967	51.7	135.6	3.51	0.487	55.2	132.0	0.390	6.09	52.9	117.0	2.76
1968	60.8	163.4	4.16	0.539	59.6	159.9	0.554	7.13	59.9	135.9	2.59

Source: F.A.O., Cocoa Statistics, Vol. 13, January, 1970 (Rome, 1970), p. 17.

price' of labour, even among unskilled labour, is high enough to frustrate attempts to recruit labour on a sufficient scale in low paying agricultural jobs on cocoa estates.

Towards the beginning of the 1930's, cocoa was coming towards an end of its role as the 'financial barometer' of the economy. By the late 1960's, it had lost all significance, and to all appearances appears unlikely to regain its position, due mainly to the constraints imposed by land, world market conditions[57] and the gargantuan role played by petroleum.

Sugar Exports 1928-1968

From the beginning of the period, sugar occupied a fairly important place in the export sector and had increased its earnings more than five fold by the end of the period. Production overall has, as we have seen, not been increasing at a steady rate. This indicates in some sense, the extent to which the industry has been externally subsidized or 'protected'. Preferential treatment was accorded Caribbean sugar following the report of the Olivier Commission in 1929.[58] Subsequent preference has been granted in the Commonwealth Sugar Agreement of 1950 and one would not be exaggerating in claiming

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[57] As of June, 1970, there was yet to be an International Cocoa Agreement. Whereas the major producers, Ghana; Ivory Coast; and Brazil had agreed on price floors and ceilings, the largest consumer, the U.S.A., has so far been particularly opposed to any form of agreement. This has been the major stumbling block. See Ricardo Blackman and Alan Rake, "What is holding up a Cocoa Agreement?", African Development, June, 1970 (London, 1970), pp. 12-13.

[58] A smaller figure than that recommended by Olivier Commission (Cmd. 3517) was accepted. The Commission recommended £13 10^{s} per ton f.o.b., but the British Parliament approved a lower figure, see Trinidad Disturbances, op. cit., pp. 12-13.

that these Agreements have more than anything else been the stimulus of the Trinidad and Caribbean sugar industry.[59] Briefly, the most recent agreement, which is due to expire in 1970, was to ensure long term supplies of sugar in the Commonwealth and to facilitate proper marketing conditions.[60] Commonwealth exporting countries agreed to limit their exports to an overall quota of 2,375,000 tons of which the Commonwealth Caribbean's share is 900,000 tons. Originally, 640,000 tons of this was sold at annually negotiated prices, but has since increased to 672,000 tons.[61] The difference between the Overall Agreement Quota of 900,000 tons and the Negotiated Price Quota of 672,000 tons is sold in preferential markets at world prices plus Imperial preference. Any exportable surplus above the Overall Agreement Quota is sold on the world market.[62]

The beginning of the period realized 74,100 tons and the best pre-war year, 1937, produced 142,750 tons. On the other hand, the best post-war year, 1965, produced 250,400 tons.[63] In fact the overall increase in production between 1928 and 1968 of from 74,100 tons to 240,000 represents a less than four-fold increase, whereas earnings increased almost six-fold. It would again appear that the price variable has been the main determinant in the export

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[59] F.B. Rampersad, "Growth and Structural Change in the Economy of Trinidad and Tobago 1951-1961", op. cit., pp. 111-112.

[60] George C. Abbott, "The West Indian Sugar Industry, with some long term projections of supply to 1975", Social and Economic Studies, Vol. 13, No. 1, March, 1964 (U.W.I. 1964), p. 30.

[61] Ibid., p. 30. This amount can however be adjusted to accommodate increases or declines in production.

[62] Ibid., pp. 30-31.

[63] Tables III, IV.

earnings of the industry, rather than its productivity. As well, Trinidad and the whole Caribbean for that matter are high cost producers[64] of sugar and could hardly compete with other producers on the world scene. Indeed, it is highly questionable whether the Caribbean Sugar industry could survive without the Imperial preference.

The World's Sugar Industry and Trinidad

Before examining the world's sugar industry, an expository note on the Caribbean's common denominator may be enlightening. Historically and economically, sugar has been associated with the Commonwealth Caribbean since the sixteenth century. For many of the islands it was the lifeline of the economy as it represented the largest single item of export trade. In this light, we have selected the year 1962, which was the year that Trinidad and Tobago, and Jamaica attained independence, and also the year that marked the abortive establishment of a federation of the little eight islands, to see how much this situation had altered. As Table VII shows, much of the area with the exception of Trinidad and some of the smaller islands depended fairly heavily on sugar exports. This also demonstrates that the area has experienced little structural transformation since the sixteenth century,[65] particularly Barbados, Antigua and St. Kitts-Nevis-Anguilla. Trinidad

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[64] G.E. Cumper, "The Development of the West Indies", in The Economy of the West Indies, ed. G.E. Cumper (U.C.W.I., 1960), p. 11. See also Havelock Brewster, Wage-Policy Issues in an Underdeveloped Economy: Trinidad and Tobago (I.S.E.R., 1969) p. 40. It is here claimed that the average cost of producing a ton of sugar in Trinidad is greater than the average realizable proceeds per ton of sugar and the molasses derived from it.

[65] Indeed this has been the conclusion of a recent study by Best and Levitt. See K. Levitt and L. Best, Export-Propelled Growth and Industrialization in the Caribbean, unpublished mono. (Montreal, 1969), p. 22.

TABLE VII

SUGAR EXPORTS EXPRESSED AS % TOTAL EXPORTS
IN THE COMMONWEALTH CARIBBEAN 1962

Countries	Value of Sugar Exports W.I. $'000	Sugar Exports as % Total Exports
Antigua	3,764.4	86.7
Barbados	27,698.8	74.8
Guyana[a]	56,846.3	38.8
British Honduras[a]	4,021.8	56.0
Jamaica	69,996.0	23.4
St. Kitts-Nevis-Anguilla[b]	8,141.0	88.1
St. Lucia	336.3	4.9
St. Vincent	---	---
Trinidad and Tobago	33,492.4	5.8

Source: Max B. Hill ed., Caribbean Economic Almanac 1964-1966 (Trinidad, 1964).

[a] 1961.

[b] 1959.

Monsterrat, Dominica, Grenada had other agricultural exports dominating their economy while St. Vincent's sugar industry folded up in 1962.

is again the exception. The irony of this is that on a world scale, Caribbean Sugar exports are insignificant, accounting for roughly 6 per cent of world exports in 1962 and 33 per cent of all Commonwealth exports. Trinidad's share in each case amounting approximately to 1.2 per cent and 6 per cent respectively. Table VIII summarizes exports up to 1962 of world producers. As with her cocoa exports, Trinidad's sugar is exported in a world environment where there are more efficient and prolific producers. Unlike cocoa, however, there is no question of quality difference here. There are basically two types of sugar: beet-sugar and cane-sugar. The former is grown in Europe, the Soviet Union and in temperate climates in general. The latter is principally a tropical to sub-tropical product. The

TABLE VIII

EXPORTS OF SUGAR FROM PRINCIPAL EXPORTING COUNTRIES
1951-1962 (Thousand Tons, raw value)

Country	Average 1951-55	1956	1957	1958	1959	1960	1961	1962
COMMONWEALTH								
Australia	507	671	789	687	640	806	829	1,161
Mauritius	479	532	576	515	504	295	498	507
Guyana	223	246	256	300	255	309	313	310
Trinidad and Tobago	136	138	142	158	151	188	215	168
Barbados	145	126	181	130	157	129	140	137
British Honduras	1	2	6	9	21	12	25	13
Jamaica	274	373	303	278	312	353	380	379
Leeward Islands	67	75	74	57	73	67	64	58
Winward Islands	9	10	8	8	6	4	4	2[c]
Fiji	135	130	173	185	183	218	136	200
India[b]	5[c]	2[c]	163	44	21	18	293	381
Uganda	13	13	23	23	14	31	33	36
Total	1,994	2,318	2,694	2,394	2,337	2,430	2,930	3,352
United Kingdom	768	634	736	614	586	524	349	340
Hong Kong	75	64	60	62	54	57	72	142
Total	2,837	3,016	3,490	3,070	2,977	3,011	3,351	3,834
NON-COMMONWEALTH								
Cuba--								
to United States	2,552	2,741	2,830	3,122	2,908	1,918	---	---
to other countries	2,333	2,555	2,540	2,356	1,926	3,628	6,322	5,050
Dominican Republic	526	685	758	660	654	1,080	737	792
Brazil	208	18	417	747	607	759	771	438
Peru	394	427	493	408	475	521	549	455
Mexico[b]	44	32[c]	93	167	138	450	477	283
Haiti	26	27	24	6	6	30	39	34
Argentina	16	---	86	---	---	99	194	33
United States[c]	60	103	9	10	6	5	6	3
Guadeloupe and Martinique	141	192	169	171	201	216	230	248

TABLE VIII--Continued

Country	Average 1951-55	1956	1957	1958	1959	1960	1961	1962
Indonesia	104	170	142	86	38	34	---	60
Taiwan	590	641	798	871	781	917	651	678
Philippines	808	919	672	938	938	1,002	1,030	966
Japan[c]	13	13	6	10	21	26	15	7
South Africa	126	180	146	237	244	257	291	472
Portuguese Oversea Provinces	96	128	160	164	142	156	148	164
Egypt	7[c]	18	19[c]	29[c]	7[c]	51	73[c]	63[c]
Malagasy Rep.	3[c]	18	22	40	33	43	37	60
Reunion	144	183	194	188	154	201	195	212
France	470	681	521[c]	484	429[c]	597[c]	873	679
Belgium	133	127	78	108	112	117[c]	114	72
Netherlands	131	48	31	34	33	132	58	12
West Germany	4	2	2	10	39	35	1	40
Italy	---[c]	1[c]	355	17[c]	17[c]	---[c]	2[c]	---[c]
Denmark	53	31	66	71	30	27	17	28[c]
Poland	427	65	105	238	301	332	685	762
East Germany	199	80	54	179	352	137	404	228
Czechoslovakia	540	153	222	395	386	313	708	565
Hungary	83	42[c]	10[c]	30[c]	67	145	189	230
Roumania	---[c]	---[c]	---[c]	---[c]	---[c]	82	158	332
Bulgaria	1[c]	2	11	23	15[c]	38	73[c]	122[c]
Total	10,232	10,282	11,033	11,799	11,060	13,348	15,047	13,088
Total Gross Exports	13,069	13,298	14,523	14,869	14,037	16,359	18,398	16,922
Total Net Exports	11,335	11,962	13,040	13,538	12,744	14,550	16,812	15,042
Soviet Union	224[d]	187	204	214	211	260	936	886

Source: Commonwealth Economic Committee, Plantation Crops: A Review (London, 1964), pp. 57-58.

[b]excluding non-centrifugal sugar.

[c]Net importer.

[d]1955 only.

difference as between the two types of sugar lie in the fact that cane sugar generally yields a higher volume of sugar per acre and has a higher sucrose content.[66] Even so there are great differences in yields per acre of the latter as between producing countries, which would lend some credibility to the view that there is room for increasing productivity per acre through intensive farming. Trinidad in particular, has been one of the producing countries with lower yields per acre and it would seem that there is room for improvement here. The policy should be to maintain production and possibly aim at reducing acreage, since land in this context has competing uses. It would appear that little progress has been made in this direction, as the yield per acre since 1962 has been constant or nearly so.[67] There has been recent uncertainty about the future marketing arrangements given the British attempt to gain entry in the E.E.C. In the event that this becomes a reality and a subsequent loss of preference is incurred, the industry would have to adjust to the competition of world markets and this involves the task of increasing efficiency. At present, the approach to cost cutting is the introduction of machinery and its sequel of eroding employment[68] which will be demonstrated later. One of the observable trends in the industry is its diminishing share in total exports, despite its greatly increased earnings. In 1933 it accounted for 31.33 per cent exports, but in 1968 this had been reduced to 4.87 per cent.[69]

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[66] C.E.C., Plantation Crops, ibid., pp.52-53 and ibid., pp. 55-56.

[67] Draft Five Year Plan, op. cit., p. 270.

[68] Ibid., pp. 270-271.

[69] Table II.

TABLE IX

YIELDS OF SUGAR PER ACRE AMONG SELECTED COUNTRIES
1950-1962 (tons/acre)

Country	Average 1950-51 to 1954-55	1955 -56	1956 -57	1957 -58	1958 -59	1959 -60	1960 -61	1961 -62
Hawaii	8.8	9.2	9.1	8.1	7.9	8.0	9.3	9.1
Peru	6.4	7.6	7.7	7.3	7.2	7.2	6.9	6.4
Indonesia	4.3	5.2	4.8	5.2	4.5	4.9	4.5	4.4
South Africa	2.8	3.4	3.0	3.4	3.6	3.3	3.5	4.1
Australia	3.3	3.1	3.3	3.4	3.8	4.1	4.1	3.6
Taiwan	3.0	3.8	3.8	3.9	4.2	3.4	4.0	3.3
Egypt	2.3	2.9	2.8	2.9	3.0	2.9	3.0	3.2
Barbados	3.8	3.2	4.4	3.3	3.9	3.3	3.3	3.2
Guyana	3.2	3.5	3.4	3.5	3.2	3.4	3.1	3.1
Jamaica	3.0	3.1	3.1	2.8	2.9	3.5	3.0	3.1
Philippines	2.2	2.4	2.4	2.8	2.9	2.8	2.8	2.9
Puerto Rico	2.8	2.9	2.4	2.5	2.8	2.8	2.8	2.8
Trinidad and Tobago	2.5	2.0	2.3	2.2	2.0	2.2	2.2	2.0

Source: C.E.C., Plantation Crops, op. cit., p. 55.

Petroleum Exports 1928-1968

Petroleum exports have exhibited the greatest degree of stability throughout the period in terms of growth rates and has been observed to be closely related to the growth rates of total exports.[70] As is evident from figures 1 and 3, the post-war stagnation or plain is common in both diagrams, whereas figure 2, representing agricultural exports, reflects both increases and decreases. The peaks of 1948, '53, '61 and '64 and the troughs of 1949, '54, '62 and '65 are again common in figures 1 and 3, but there is no corresponding consistency

[70]Compare figs. 1 and 3. Peaks and troughs are more similar or in agreement than is true for fig. 2, agricultural exports.

when agricultural exports are examined. The closeness of the relationship is to be noted particularly in cols. 3-6 of Table X. The year 1962 was an unusual year as the entire external sector experienced substantial increases in earnings,[71] in this regard, using 1967 as our terminal point would substantially reduce the data in column 5, yielding negative figures for both cocoa and sugar.

TABLE X

AVERAGE ANNUAL RATES OF GROWTH OF MAJOR EXPORTS, TOTAL EXPORTS AND TOTAL IMPORTS 1928-1968[a] (percentages)

Export Commodity	1928-1937	1937-1947	1949-1955	1955-1961	1961-1968	1967-1968
Petroleum	6.01	19.50	18.33	23.53	6.67	21.38
Sugar	0.67	3.23	12.69	5.91	1.03	19.88
Cocoa	6.78-	0.38	26.92	7.50-	3.47	46.82
Total Exports	0.11	13.38	17.83	20.00	6.76	21.42
Total Imports	4.68	23.14	15.18	16.39	6.20	15.55

Source: Compiled from Table II.

[a]These figures are in current prices.

Since 1946, petroleum exports have accounted for over 60 per cent of total exports and between 1961 and 1965 well over 80 per cent. Unlike agricultural exports, petroleum exports have benefited from growing stable world demand, originating in the automobile and air craft industries. This has been reinforced by the fact that the industry is firmly established with a proven resource base. Facilities and trained personnel are available and by virtue of location and political climate, Trinidad presents itself as a secure source of oil

[71]See Column 6, Table X.

operations and oil supplies.[72] Strategically located to meet the requirements of both the Western Hemisphere and western Europe and Africa, she can easily take advantage of an interruption in world supplies from less secure sources. Indeed, it has been pointed out that the Suez Crisis of the 1950's gave a fillip to petroleum exports as depicted in Table X.[73] As well, the country's membership in the British Commonwealth has given its oil special advantages in the Commonwealth market over bunker and export sales from the 'dollar areas'.[74] However, part of the rapid post-war growth must be attributed to increased importation of crude oil, as costs of production in Trinidad are quite high.[75] In this connexion, exports are closely tied to imports of crude petroleum.

The World Petroleum Exporters and Trinidad

Trinidad is by no means an important producer nor exporter of petroleum in the world content. The basis of the industry has been its ability to maintain low cost refining operations despite high cost of crude oil production.[76] The largest oil-producing countries in 1966 were the United States, the Soviet Union, followed by

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[72]Gov't of Trinidad and Tobago, The Trinidad Oil Economy (Trinidad, 1959), p. 24.

[73]Alister McIntyre, "Some Aspects of Development and Trade", op. cit., p. 132.

[74]Trinidad Oil Economy, op. cit., p. 24.

[75]This has been due mainly to the complex geological structure in which oil deposits are located. To date much of inland oil deposits are in isolated unconnected spots, so that drilling operations often prove fruitless. See Henry Longhurst, Adventure in Oil: The Story of B.P. (London, 1959), p. 280.

[76]Gov't of Trinidad and Tobago, Report of the Commission of Enquiry into the Oil Industry of Trinidad and Tobago 1963-1964 (London 1967), p. 37.

Venezuela and the Middle Eastern States of Saudi Arabia, Kuwait, Iraq and Iran. Together they accounted for about 75 per cent of world output. Like Trinidad, the latter five countries are dependent on their oil exports to the extent that they are of the order of 85 per cent of their total export earnings.[77] In Table XI, Trinidad's crude petroleum production is depicted against the important producers. It can be observed that world output more than doubled between 1956 and 1968, with some producers like the U.S.S.R., Iran and Saudi Arabia trebling their output. Others like Canada, Iraq and Kuwait doubled their output. This has posed a problem of surplus supply, in that although world demand has increased, its increase has not been sufficient to meet supplies and increased production. The result is the concomitant pressure on prices, which has led to the formation of The Organization of Petroleum Exporting Countries (O.P.E.C.). The organization was formed by some of the major prolific producers in 1960 with the purpose of strengthening prices through altering "the treatment of royalties for tax purposes", and to allocate production quotas between the members. The membership includes: Indonesia, Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and Venezuela, but does not include Trinidad.[78] She can however benefit from whatever progress is made in the strengthening of crude oil prices, since she also exports crude oil. Further comparison is made between the export earnings of some of the prolific producers

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[77] Michael Zammit Cutajar and Alison Franks, The Less Developed Countries in World Trade (London, 1967), p. 37.

[78] Ibid., pp. 38-39.

TABLE XI

WORLD PRODUCTION OF CRUDE PETROLEUM IN SELECTED COUNTRIES 1955-1968 (MI

Year	Argentina	Canada	Colombia	Iran	Iraq	Kuwait	Qatar	Mexico	Indonesia	Roumania	U.S.S.R.	S A
1955	31	129	40	121	251	398	42	89	87	79	510	
1956	31	172	45	197	232	400	45	91	94	81	612	
1957	31	182	47	263	163	416	51	88	114	83	718	
1958	36	166	47	301	266	510	63	94	119	84	826	
1959	45	185	54	345	311	505	61	96	139	83	946	
1960	64	190	56	386	354	594	63	99	153	86	1,079	
1961	84	221	53	432	366	600	64	107	155	86	1,212	
1962	98	244	52	482	367	669	68	112	168	88	1,360	
1963	97	258	60	538	423	705	70	115	165	91	1,504	
1964	100	275	63	619	462	775	78	116	169	92	1,644	
1965	98	292	73	688	482	792	84	118	178	94	1,786	
1966	103	321	71	771	505	831	106	121	169	96	1,948	
1967	115	351	N.A.	948	446	837	118	133	186	98	2,100	
1968	125	378	N.A.	1,039	550	886	124	142	220	99	2,252	

Sources: Commodity Research Bureau Inc., Commodity Year Book 1968 (New York, 1968), p.
_____, Commodity Year Book 1970 (New York, 1970), p.
C.S.O. Gov't of Trinidad and Tobago, Annual Statistical Digests.

* Barrel = 42 gallons, for Trinidad Barrel = 33 Imperial gallons.

TABLE XI

PETROLEUM IN SELECTED COUNTRIES 1955-1968 (Millions of Barrels*)

Qatar	Mexico	Indonesia	Roumania	U.S.S.R.	Saudi-Arabia	U.S.A.	Venezuela	Trinidad	World Total
42	89	87	79	510	352	2,484	787	25	5,626
45	91	94	81	612	361	2,617	899	25	6,125
51	88	114	83	718	362	2,617	1,014	34	6,438
63	94	119	84	826	370	2,449	951	37	6,608
61	96	139	83	946	400	2,575	1,011	41	7,145
63	99	153	86	1,079	456	2,575	1,042	42	7,689
64	107	155	86	1,212	508	2,622	1,066	46	8,184
68	112	168	88	1,360	555	2,676	1,168	49	8,882
70	115	165	91	1,504	595	2,753	1,186	49	9,538
78	116	169	92	1,644	628	2,787	1,242	50	10,309
84	118	178	94	1,786	739	2,849	1,268	49	11,058
106	121	169	96	1,948	873	3,028	1,230	56	12,013
118	133	186	98	2,100	948	3,216	1,293	65	12,873
124	142	220	99	2,252	1,036	3,329	1,319	67	14,084

Commodity Year Book 1968 (New York, 1968), p. 250.
Commodity Year Book 1970 (New York, 1970), p. 252.
ago, Annual Statistical Digests.

idad Barrel = 33 Imperial gallons.

and Trinidad in Table XII and it is readily noticeable that the gap between Trinidad's and the prolific producers' export earnings is narrower than that of their production. She is about tenth place among known producers with published statistics. This is mainly due to the fact that among O.P.E.C. members exports consist mainly of crude petroleum, whereas over 90 per cent of Trinidad's exports are refined products.[79] The former, as was noted, is subject to price instability, while the latter has been the object of fairly stable demand.

TABLE XII

EXPORTS OF PETROLEUM AND PETROLEUM PRODUCTS IN SPECIFIED COUNTRIES 1963-1966 (U.S. mill.$)

Countries	1963	1964	1965	1966
U.S.A.	472.0	490.3	469.7	509.8
Venezuela	2,434.3	2,510.6	3,331.6	3,274.8
U.S.S.R.	920.8	952.7	1,007.4	415.8
Saudi Arabia	1,029.2	1,173.9	1,326.1	1,521.3
Iran	796.3	1,103.1	1,130.0	1,142.5
Iraq	626.5	725.1	788.9	822.1
Canada	314.2	368.7	390.0	438.7
Colombia	-----	83.0	96.1	31.4
Argentina	11.5	6.1	9.2	14.0
Trinidad-Tobago	176.7	216.8	233.9	228.2
Nigeria	56.5	89.8	190.7	260.7
Libya	327.2	605.9	784.9	982.8

Source: U.N., Yearbook of International Trade Statistics 1965, 1966.

[79] See Petroleum Dept., Annual Administration Report for the Year 1960 (Trinidad, 1967), p. 22 and cf. U.N. Yearbook of International Trade Statistics. Indeed Edith Penrose points out that crude oil production is concentrated in areas in which both consumption and refining are relatively small. Edith Penrose, The Large International Firm in Developing Countries (London, 1968), p. 46.

In general, over the period, it can be said that the years 1923-1935 saw much the same voletility in petroleum exports as in agriculture. Some improvement was made between 1936-1939, but the real phase of steady growth in this commodity has been between 1946-1968. The most revealing aspect of the industry is its steadily increasing share of total exports as pointed out. Most of these exports are to the U.S., since American capital dominates the industry and the industry's exports have benefited from its inclusion within the "protected marketing area".[80] As well, in its second largest export market--the U.K., it enjoys the preference of the "international marketing grids" of the exporting companies which although amounting to a protective market is less effective than its U.S. counterpart. The rest of the exports are to the E.E.C., the Caribbean, Canada, and there are some Bunker sales to airlines and ships plying the area, but has recently encountered competition in this latter activity from Barbados and Panama. In other words, the industry is dependent on protective marketing agreements much the same as its agricultural counterparts.

Other Exports

Apart from the exports named above, the other remaining export items are dominated by chemicals, chiefly fertilizers, mineral tars

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[80]Report of the Commission of Enquiry into the Oil Industry of Trinidad and Tobago, op. cit., p. 26, 27. "Protected marketing area" enjoy the benefits of the umbrella which the American system holds over crude oil products in the U.S. It is of paramount importance to the long term future of the industry.

and ammonium compounds. These are all appendages or are in some way related to the dominant petroleum industry, the subsidiary natural gas industry, and the asphalt industry. There are also exports of citrus, coffee, cement, rum, bitters and a variety of light manufactures. In 1967, these items accounted for 15.5 per cent of total domestic exports.[81] Of these, mineral tars and ammonium compounds accounted for some 8.2 per cent. As far as data shows, these industries with the possible exception of citrus products are of fairly recent origin, more precisely in the post 1950 period. The earlier period of our study revolved around the exports of primary staple industries. For that matter, the entire economy revolved around primary exports:

> Prior to 1950 there was not much in the way of manufacturing in the economy. There was the inevitable processing of raw materials for exports, principally sugar, rum, petroleum products and pitch, and a few residentiary industries producing items such as ice, bread and cakes and certain types of clothing. Almost everything else was imported.[82]

Some of these 'new' post-war export industries have shown some signs of promise, particularly those with mineral content. But most have so far had erratic export earnings. Among them, tar oils, a product of the Asphalt Lake, and Ammonia seem to have exhibited the most strength. On the other hand, rum, bitters, coffee and citrus products have had severe fluctuations. Table XIII shows the exports of these products over the last decade. In 1967, chemicals (fertilizers and ammonium) overtook sugar as the second most important

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[81] C.S.O., Annual Statistical Digest 1967, op. cit., Table 153.

[82] Edwin Carrington, "Industrialization in Trinidad and Tobago since 1950", New World Quarterly, Vol. IV, No. 2, Croptime 1968 (Port-of-Spain, 1968), p. 37.

TABLE XIII

VOLUME OF EXPORTS OF SPECIFIED COMMODITIES 1958-1968
(TT 000 $)

Commodities	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Tar Oils	1,239	1,598	1,461	1,690	4,511	3,436	7,124	10,513	22,669	31,414	27,769
Coffee	2,498	2,363	1,272	1,421	1,075	2,991	4,658	2,954	2,707	2,768	5,457
Citrus Products *	6,009	3,209	5,390	3,977	6,307	.....	4,693	5,449	5,555	5,436	6,391
Fertilizers	-----	651	6,316	7,122	7,946	6,779	7,041	10,278	11,591	10,749)	47,840
Ammonium	.....	.....	.....	.....	.....	.....	10,531	12,095	19,025	30,239)	
Cement	3,057	3,633	2,944	1,190	2,522	.....	2,985	3,360	4,066	3,213	.....
Rum	1,727	1,911	1,876	1,853	1,635	.....	2,015	1,867	2,103	2,105	2,156
Bitters	933	1,037	1,085	1,244	574	.....	1,366	1,476	1,214	1,611	1,730
Total Domestic Exports[b]	412,768	434,909	476,436	579,548	579,658	624,717	686,254	678,313	717,170	752,673	923,658

Sources: C.S.O., Annual Statistical Digests 1962, 1964, 1965, 1966, 1967 (Trinidad).
_____, Quarterly Economic Report, October-December, 1969 (Trinidad, 1969), p. 8.
Max B. Ifill, ed., Caribbean Economic Almanac 1964-1966 (Trinidad, 1964), p. 205.
Gov't of Trinidad and Tobago, Draft Third Five Year Plan 1969-1973 (Trinidad, 1968), p. 274.

..... not available
----- no exports
* includes oranges, grapefruit, canned grapefruit, grapefruit juice, orange juice.
[b]These differ from Table II because they exclude re-exports.

export commodity, but the largest export item, petroleum, was at least 15 times as great as chemical exports in 1968. In other words, these export items are insignificant when compared with the total volume of export trade in spite of their increasing importance. The gap between petroleum exports and all other exports is of such a magnitude as to make the task of a wider export base seem impossible. It would indeed take a phenomenal increase in chemical exports or a combined effort with agriculture of substantial magnitude to limit the pervading influence of petroleum exports. To date agriculture has not shown that capability, nor has diversification gone far enough.

The Structure of Import Trade

Period I: 1928-1947

In this phase, particularly between 1928 and 1934, the most important item of import trade was food. Over 20 per cent of imports consisted of food items as is shown in Table XIV. The largest item in the food basket was flour from Canada, which up to 1947 was the largest single imported food item.[83] This particular commodity has had a long history in Caribbean import trade dating back to the slave-era, and it makes up part of the staple diet of a large number of people in the area. In regard to the argument of a malaise in food production in developing countries, and with reference to the Caribbean, it must be borne in mind that wheat will not thrive in a tropical rain forest type climate as obtains in Trinidad. The fact that it has become a major item in the staple diet must be attributed to historical circumstances which have conditioned the

[83] See Table XV.

TABLE XIV

VOLUME OF IMPORTS OF MAJOR COMMODITIES 1928-1968 (mill. TT$ and percenteges)

Years	Food, Drink Tobacco	%	Raw Materials	%	Manufactured Articles	%	Crude Petroleum	%	Machinery	%	Others	%	Total Imports
1928	6.8	27.14	1.1	4.39	2.7	10.84	0.3	1.24	3.9	15.54	0.9	3.67	25.2
1929	7.1	25.01	1.3	4.67	4.4	15.44	0.3	0.95	5.3	18.51	0.9	3.14	28.5
1930	6.1	23.84	1.2	4.57	3.8	14.66	0.5	2.01	5.5	21.60	1.4	5.34	25.6
1931	5.0	26.49	0.7	3.96	3.1	16.41	0.4	2.22	2.1	11.40	1.0	5.31	18.8
1932	4.8	26.86	0.8	4.52	3.1	17.31	0.4	2.48	2.2	12.39	0.7	4.21	17.7
1933	4.5	23.47	0.3	1.40	3.4	17.74	0.7	3.49	3.0	15.59	0.9	4.74	19.2
1934	4.8	22.10	0.6	2.94	2.9	13.69	1.0	4.57	3.2	15.04	1.0	4.59	21.5
1935	4.7	22.17	0.7	3.17	6.6	31.23	0.7	3.22	2.4	11.41	1.0	4.64	21.0
1936	5.7	20.78	0.8	2.82	7.7	28.28	0.9	3.13	3.1	11.26	1.6	5.78	27.2
1937	6.4	17.80	1.3	3.63	11.7	32.61	0.8	2.31	4.7	13.04	2.1	5.77	35.8
1938	5.9	16.70	1.3	3.78	10.1	28.43	1.0	2.67	5.0	14.11	2.2	6.24	35.5
1939	6.1	17.56	1.5	4.44	8.6	24.86	0.7	2.01	5.4	15.45	2.2	6.24	34.3
1940	11.0	24.29	2.7	6.02	31.4	69.57	a		a		4.3	0.09	45.1
1941	14.6	25.32	3.5	6.13	39.3	68.40	a		a		7.4	0.12	57.5
1942	18.0	32.64	3.8	6.95	33.2	60.34	a		a		3.1	0.05	55.1
1943	21.1	35.28	6.6	11.02	32.0	53.57	a		a		6.8	0.11	59.8
1944	24.3	35.20	6.8	9.84	37.8	54.81	a		a		9.4	0.13	69.1
1945	15.1	23.22	3.7	5.62	11.7	18.03	6.0	9.16	7.8	11.94	3.4	5.21	65.0
1946	16.5	21.92	3.1	4.14	15.4	20.47	6.8	9.04	7.9	10.41	3.6	0.48	75.4
1947	21.7	18.29	5.4	4.52	24.5	20.62	15.6	13.15	14.4	12.11	5.7	4.76	118.8
1948	32.4	24.59	32.1	24.32	67.2	50.96	a		c		1.4	0.11	131.8
1949	31.6	20.45	4.3	2.76	85.0	55.08	33.3	21.58	a		b		154.2
1950	36.2	21.37	3.7	2.18	88.4	52.22	41.0	24.10	a		b		169.2
1951	40.5	18.52	16.1	7.36	63.2	28.91	68.2	31.19	29.7	13.58	0.7	0.32	218.6
1952	46.8	19.18	15.1	6.19	70.1	28.74	76.9	31.52	34.4	14.10	0.7	0.28	243.9
1953	47.0	19.88	16.0	6.77	68.5	28.98	71.0	30.04	33.2	14.04	0.7	0.29	236.3
1954	50.8	20.36	18.2	7.29	70.7	28.33	70.1	28.09	38.5	15.43	1.2	0.48	249.5
1955	56.9	19.30	21.9	7.43	81.0	27.48	83.5	28.33	50.2	17.03	1.2	0.40	294.7

TABLE XIV--Continued

Years	Food, Drink Tobacco	%	Raw Materials	%	Manufactured Articles	%	Crude Petroleum	%	Machinery	%	Others	%	Total Imports
1956	60.0	19.83	23.4	7.76	81.7	27.06	87.0	28.81	47.9	15.85	1.9	0.63	301.8
1957	63.5	17.82	26.9	7.54	97.0	27.23	97.0	27.25	69.5	19.51	2.2	0.63	356.2
1958	69.5	16.83	29.3	7.11	110.6	26.80	126.9	30.76	73.2	17.75	2.9	0.70	412.5
1959	73.6	16.40	30.0	6.69	115.9	25.83	144.4	32.18	80.8	18.01	3.8	0.85	448.6
1960	78.7	15.60	34.3	6.79	127.2	25.19	171.1	33.91	89.1	17.64	4.2	0.82	504.7
1961	80.9	13.84	33.8	5.78	120.4	20.59	271.7	46.48	73.8	12.63	3.9	0.66	584.6
1962	83.5	13.76	35.2	5.80	127.4	21.00	278.6	45.94	78.5	12.94	3.3	0.53	606.4
1963	84.1	13.00	36.7	5.66	122.7	18.96	302.9	46.80	95.6	14.77	5.1	0.78	647.2
1964	90.9	12.42	42.2	5.77	126.5	17.29	371.7	50.82	95.7	13.08	4.4	0.60	731.4
1965	94.0	11.48	48.4	5.91	141.8	17.33	401.0	49.03	129.1	15.79	3.5	0.42	817.8
1966	96.2	12.34	49.1	6.30	134.7	17.30	391.3	50.25	102.7	13.19	4.7	0.60	778.6
1967	93.4	12.88	49.6	6.83	126.1	17.39	355.8	49.05	95.7	13.19	4.7	0.64	725.3
1968	93.0	11.07	58.1	6.92	133.1	15.84	446.0	53.08	105.0	12.50	4.5	0.55	840.1

Source: Table II.

Notes: a. included in column 3.
b. not classified.
c. included in column 2.

TABLE XV

FOOD IMPORT BILL 1928-1947 (£'000)

Year	Cattle	Meat	Butter	Raw Cocoa	Fish	Flour	Rice	Condensed & Dried Milk
1928	75	126	62	259	143	440	215	106
1929	79	133	108	243	133	442	234	112
1930	78	116	65	150	127	398	220	118
1931	70	103	67	108	106	298	158	132
1932	74	101	66	117	88	284	158	104
1933	73	94	71	102	86	283	148	83
1934	72	88	70	129	85	288	164	95
1935	54	104	70	75	90	306	172	98
1936	50	111	70	220	90	340	180	116
1937	48	140	83	206	110	434	187	121
1938	43	157	71	109	121	371	208	155
1939	43	188	88	108	129	329	207	180
1945	387	300	197	118	329	813	386	616
1946	175	433	176	196	324	1,294	274	572
1947	147	646	209	190	406	1,909	272	749

Sources: H.M.S.O., Cmd. 8051, op. cit., p. 213.
_____, Cmd. 5872, op. cit., p. 295.

consumer diet and taste.[84] During the period, flour imports represented about 1/3 of all food imports. Other food imports during the period, consisted of cattle largely from Venezuela; meat; butter; fish most of which was and still is Cod from Canada, which like flour, is also part of the 'conditioning syndrome'; raw cocoa from Venezuela to supplement the local cocoa industry; rice largely from India, Burma and Guyana; and condensed and dried milk. Of these items, scarcity of suitable land would make cattle-rearing on a sufficient scale impossible or nearly so. This has linkage implications that would affect the imports of meat, butter and processed milk, in that

[84]See Eric Williams, Capitalism and Slavery, op. cit., pp. 52-59 et passim.

they are part and parcel of each other. Margarine can be substituted for butter and has been manufactured locally after 1947. Rice on the other hand is grown locally and has been for some time, but its quality and output do not meet local requirements. It is basically a peasant subsistence industry where the peasants grow largely for their own consumption. Land is also a militating factor here, but output and quality can conceivably be improved with the use of intensive techniques such as fertilizers and high-yielding seeds. It would appear that generally speaking much of Trinidad's food import bill of this early period had genuine constraints on their development and production at home.[85] Regarding other imports, raw materials consisted of coal from the United States and wood and timber from Canada and the U.S. The former was used by the local railway and served as fuel in shipping, while the latter was a major input of the construction industry at that time. As we previously mentioned, the pre-1950 period saw little manufacturing activity in the country such that imports of manufactures covered a wide range of items from footwear, hats and caps, even shirts, to motor cars and lorries. The effect of the Lewis plan on import-substitution of manufacture can be viewed from the fact that between 1928 and 1947 imports increased 9 times, whereas between 1948 and 1968, the increase was only two-fold. The rate of increase for food items have more or less been stable over both periods.

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[85] An interesting approach to this problem, using linear programming techniques is provided in S. DeCastro and John Lauritz, "Some Steps Towards an Optimal Foodstuffs Consumption, Production and Importation Programme for Trinidad and Tobago", Social and Economic Studies, Vol. 16, No. 4, December, 1967 (Iser, 1967).

Period II: 1948-1968

The second period saw the emergence and dominance of crude petroleum imports to the extent that in 1968, petroleum imports accounted for 53.08% of total imports as shown in Table XIV. Between 1948 and 1968, petroleum imports increased more than thirteen fold in value. This has been precipitated by the fact that refining capacity has grown in excess of domestic production, thus necessitating the importation of foreign crude supplies.[86] Imports of crude petroleum accounted for 45.8 per cent of the input of the industry in 1951 and by 1965 had increased to 67.7 per cent.[87] This also means that in order to maintain and increase petroleum exports, the industry has to increase the imports of its input. Only a discovery of great magnitude can offset this situation. The industry is vertically integrated and operates at all stages of production; exploring and mining to processing, refining and the manufacture of petrochemicals. By its very nature, the industry is heavily export-biased; in 1960 a mere 2.5 per cent of the output was consumed locally, while the remainder, 97.5 per cent was exported.[88] In other words, almost all of its output is exported. Much of the raw materials imported over this period were also inputs of the petroleum industry in the form of steel pipes and tubes, and the rest were other inputs for the manufacturing sector. Import substitution can

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[86]Roland Gill, op. cit., p. 4.

[87]T. Ainsworth Harewood, op. cit., p. 179.

[88]Petroleum Dept., Annual Administration Report for the Year 1960, op. cit., p. 27.

conceivably attack the food import basket in some areas; rice as mentioned before, domestic fishing, though imported Cod cannot be replaced with local resources; other meat substitutes like chicken and pork can be developed and produced in adequate supply at home.[89] This is essential in the light of the new CARIFTA and its potential for facilitating an expanded market. Petroleum imports are necessary and will continue to be a significant part of exports unless domestic production should rise sharply. Finally, as Armstrong pointed out, in regard to manufactures, it would appear that there is room for more vigorous effort in restricting the importation of some luxury items.[90]

Direction of Trade 1928-1968

In Period I (1928-1947), over 55 per cent of Trinidad's imports came from the Commonwealth, mostly Britain and Canada. The U.S. was the only significant outsider during this period, as she supplied much of the wide range of manufactures that were imported. On the export side, between 47 per cent and 74 per cent of all exports remained in the Commonwealth bloc. From 1928-1932 the U.S. provided a large export market largely for cocoa exports, but with the worsening of prices occasioned by the depression and crop failures in Trinidad, its share dropped from 35.0 per cent or $9.97 million in 1929 to 6 per cent or $871,920 in 1949.

Period II (1948-1968), saw a steady decrease in the share of import trade held by Commonwealth countries, and an ever increasing

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[89]Considerable progress has been made with these 2 items. See Draft Plan 1969-1973, Gov't of Trinidad and Tobago, pp. 239-282.

[90]Eric Armstrong, Import-Substitution in Trinidad and Tobago, op. cit., p. 1.

TABLE XVI

DIRECTION OF TRADE 1928-1968 (per

	1928	1929	1930	1931	1932	1933	1934	1935	1936	193
								IMPORTS		
TOTAL IMPORTS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
United Kingdom	34.2	31.3	35.4	35.2	42.9	44.5	38.9	43.3	39.0	36.
Canada	18.8	16.7	15.5	16.8	13.5	11.9	10.8	11.9	12.1	12.
Australia	--	0.0	0.1	0.1	0.3	0.1	0.1	0.1	0.4	1.
Br. East Indies & Hong Kong	2.9	4.0	3.2	2.8	3.6	4.3	4.8	5.9	4.9	4.
Br. West Indies & Guyana	4.2	3.1	4.3	4.8	4.9	3.7	1.9	1.7	1.8	1.
New Zealand	--	--	--	--	--	--	--	--	--	--
Or Sterling Areas	0.3	0.1	0.0	0.4	0.6	0.6	1.1	1.5	1.1	1.
Total Commonwealth Countries	60.5	55.4	58.5	60.0	65.7	65.1	57.6	64.4	59.2	56.
United States	21.0	25.2	24.0	18.4	12.7	12.8	13.8	15.6	16.3	23.
Venezuela	6.5	6.6	5.2	6.6	6.7	6.8	14.4	6.1	11.0	5.
France	2.2	2.5	1.7	2.2	1.4	1.1	1.0	1.2	1.0	1.
Netherlands	1.9	2.2	2.4	2.4	2.0	2.6	2.4	1.5	1.3	2.
Saudi Arabia										
								EXPORTS (selected c		
TOTAL EXPORTS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
United Kingdom	34.0	31.2	26.8	19.6	29.7	48.7	48.0	43.4	48.5	50.
Canada	11.5	9.9	10.4	17.7	14.6	12.6	6.5	12.7	12.1	4.
Commonwealth Caribbean	3.1	3.8	6.8	8.5	8.0	7.9	8.3	7.0	6.9	7.
Total Commonwealth	51.8	47.9	48.1	50.1	55.0	72.5	66.3	67.1	71.4	66.
United States	28.6	35.0	32.8	25.4	17.2	8.0	6.8	8.6	8.0	7.

Source: Tables II, XIV.
Annual Statistical Digest 1962, Gov't of Trinidad-Tobago (Trinidad, 1964).

TABLE XVI

DIRECTION OF TRADE 1928-1968 (per

	1928	1929	1930	1931	1932	1933	1934	1935	1936	193
								IMPORTS		
TOTAL IMPORTS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
United Kingdom	34.2	31.3	35.4	35.2	42.9	44.5	38.9	43.3	39.0	36.
Canada	18.8	16.7	15.5	16.8	13.5	11.9	10.8	11.9	12.1	12.
Australia	--	0.0	0.1	0.1	0.3	0.1	0.1	0.1	0.4	1.
Br. East Indies & Hong Kong	2.9	4.0	3.2	2.8	3.6	4.3	4.8	5.9	4.9	4.
Br. West Indies & Guyana	4.2	3.1	4.3	4.8	4.9	3.7	1.9	1.7	1.8	1.
New Zealand	--	--	--	--	--	--	--	--	--	--
Or Sterling Areas	0.3	0.1	0.0	0.4	0.6	0.6	1.1	1.5	1.1	1.
Total Commonwealth Countries	60.5	55.4	58.5	60.0	65.7	65.1	57.6	64.4	59.2	56.
United States	21.0	25.2	24.0	18.4	12.7	12.8	13.8	15.6	16.3	23.
Venezuela	6.5	6.6	5.2	6.6	6.7	6.8	14.4	6.1	11.0	5.
France	2.2	2.5	1.7	2.2	1.4	1.1	1.0	1.2	1.0	1.
Netherlands	1.9	2.2	2.4	2.4	2.0	2.6	2.4	1.5	1.3	2.
Saudi Arabia										
								EXPORTS (selected c		
TOTAL EXPORTS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
United Kingdom	34.0	31.2	26.8	19.6	29.7	48.7	48.0	43.4	48.5	50.
Canada	11.5	9.9	10.4	17.7	14.6	12.6	6.5	12.7	12.1	4.
Commonwealth Caribbean	3.1	3.8	6.8	8.5	8.0	7.9	8.3	7.0	6.9	7.
Total Commonwealth	51.8	47.9	48.1	50.1	55.0	72.5	66.3	67.1	71.4	66.
United States	28.6	35.0	32.8	25.4	17.2	8.0	6.8	8.6	8.0	7.

Source: Tables II, XIV.
Annual Statistical Digest 1962, Gov't of Trinidad-Tobago (Trinidad, 1964).

6	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
7	36.2	32.7	32.6	29.8	23.4	22.4	20.4	17.9	16.6	16.8	14.6	14.7
9	7.0	6.1	6.2	5.6	5.0	5.0	4.8	4.7	5.1	5.6	5.2	4.2
8	0.7	0.9	1.1	1.0	0.8	0.9	0.7	1.3	1.4	1.2	1.3	1.0
9	0.9	neg.	neg.	neg.	neg.	neg.	neg.	neg.	neg.	neg.	neg.	neg.
7	2.3	1.8	2.5	2.6	2.2	2.4	2.0	2.0	1.7	2.0	2.2	2.0
·	--	0.2	1.4	1.3	1.2	1.2	1.3	1.4	1.2	1.4	1.4	1.0
3	1.9	2.9	2.3	1.6	1.4	1.4	3.9	4.4	4.1	5.8	8.7	7.7
9	45.9	44.6	46.0	41.8	50.5	33.2	25.8	23.6	22.3	23.3	24.5	
0	14.1	13.9	13.0	13.9	11.3	12.6	15.8	14.0	16.8	14.2	15.2	14.4
6	21.6	19.2	20.8	22.1	21.0	18.6	18.9	22.4	25.5	30.3	39.7	48.0
7	0.6	--	--	--	--	--	--	--	--	--	--	--
3	3.4	--	--	--	--	--	1.9	1.9	1.2	1.3	1.3	--
·	0.2	6.0	2.7	7.1	21.1	23.1	18.0	17.8	16.3	13.3	13.1	--
,0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
.11	32.71	26.0	31.9	31.1	24.1	23.2	25.6	24.5	23.3	17.5	14.3	12.5
.3	3.0	3.6	5.2	5.1	4.7	4.9	4.7	5.7	4.8	4.3	4.7	4.4
.9	4.4	6.5	7.2	7.9	7.9	9.0	4.9	2.8	3.1	3.1	3.1	2.9
.4	45.1	39.2	46.6	45.9	39.5	39.0	36.4	35.1	29.8	26.1	25.4	
.6	7.3	19.6	15.0	19.5	24.6	24.5	29.1	29.8	34.1	35.9	41.2	40.2

share with oil producing Venezuela. In 1968, imports from Venezuela accounted for $382.6 million or 48.0 per cent of all imports, while the Commonwealth's share had, in comparison, dropped to $201.3 million or around 25 per cent. This was due mainly to the increased need for crude oil imports mentioned earlier. In 1968, 74 per cent of all crude oil imports came from Venezuela with the remaining 26 per cent originating in Libya, Gabon, Nigeria, Saudia Arabia and Colombia.[91] Since these imports make up over 50 per cent of all imports as shown in Table XIV, the shares of the countries involved have increased correspondingly. No trade was recorded with Saudi Arabia in 1956, but by 1962 it had captured $140.3 million or 23.1 per cent of Trinidad's imports. This again reflects the crucial necessity to import crude petroleum. It is noted that very little trade has taken place with other Caribbean countries; no appreciable movements are recorded throughout both periods. On the export side in Period II, the Commonwealth share was halved in the period although there was an increase in absolute volume. At the same time, the U.S.'s share increased almost thirteen fold between 1955 and 1968 alone. U.S.'s share in 1968 was $398.9 million or 40.2 per cent as opposed to $8.3 million or 2.9 per cent in 1955. This rapid shift in exports to the U.S. since 1955 is explained by the fact that in 1956, the Texas Oil Co. acquired Trinidad Leaseholds Ltd. or the Trinidad Oil Co. which was then the largest company in the industry. That trade

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[91] Ministry of Petroleum and Mines, Monthly Bulletin: Petroleum Industry, June, 1969, Gov't of Trinidad and Tobago, (Trinidad, 1969), p. 2.

with the U.S. has increased, must, therefore, be attributed to the fact that the new company, Texaco Trinidad Inc., benefits from import quotas it enjoys as a subsidiary of an American Oil Co. As we have indicated, these quotas are now of vital importance to Trinidad's economy.[92] Oil trade dominates both imports and exports with the largest import market being Venezuela, while the largest export market is the U.S., hence these two countries dominate both export and import trade. The lack of diversity in any country's distribution of trade raises questions about whether a great and increasing dependence on one market is compatible with increasing political advancement.[93] The fact that 40 per cent of exports are now sold in U.S. markets and are not developed with the interest of the peripheral primarily in view, but has been brought about by special arrangements, raises questions not only of the political, but also the economic independence of the peripheral. On the import side, it is true that Venezuela dominates here, but in case of uncertainty there are other available suppliers outside O.P.E.C. that can readily meet national requirements, notably Nigeria and Colombia. This does not mean that one should condemn Trinidad's trade with the U.S. out of hand, the question is whether in keeping with stated policies of wider-based growth, the petroleum industry and other industries for that matter, should not be encouraged to seek markets wherever they exist, even if it means markets outside traditional trading blocs.

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[92] Gov't of Trinidad and Tobago, Report of the Commission of Enquiry into the Oil Industry 1963-1964, op. cit., pp. 25-28.

[93] "Analyst", "Expansion of British Caribbean Trade with Europe", Social and Economic Studies, Vol. 6, No. 1, March, 1957 (Iser, 1957), p.30.

Balance of Visible Trade 1928-1968

The overall picture is presented in Table XVII. The stagnation years 1928-1947, generally saw unfavourable trade balances with corresponding declining terms of trade which reached its highest point in 1945. An important point here is that agricultural exports were then playing a larger role in the export bag than subsequently. It must be remembered also that much of this earlier period was plagued with the depression and the economic maladjustments of the war and early post-war years. As Haberler points out:

> It would seem to follow that the terms of trade of countries whose exports consist largely of primary products and whose imports consist largely of manufactures will tend to deteriorate during business cycle downswings and improve during cycle upswings.[94]

Thus we find that with the post 1950 upswing and the increased dominance of petroleum products in the export sector, there was an overall trade surplus of $50,943,900 between 1950-1968. There were some fluctuations even in this period, for instance, 1965 saw a trade deficit of $126.5 million which is explained by Table IV, in which it is shown that domestic crude petroleum production experienced its greatest decline in the post-war period, hence there was increased imports of foreign crude with its concomitant increase in total imports as shown in Table XVII. Generally, over the post 1950 period there was an equal number of trade deficits and surpluses; only for a very brief period (1956-1959) did surpluses persist. Indeed this period

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[94]Gottfried Haberler, "Terms of Trade and Economic Development", in I.E.A., Economic Development for Latin America, ed. H.S. Ellis (London, 1961), p. 289.

TABLE XVII

EXPORTS, IMPORTS, BALANCE OF VISIBLE TRADE AND GROSS BARTER TERMS OF TRADE 1928-1968 ($'000 TT)

Year	Exports	Imports	Balance of Visible Trade	Gross Barter Terms of Trade Qm/Qx
1928	27,576.0	25,210.0	+ 2,366.4	0.91
1929	28,449.6	28,473.6	- 24.0	1.00
1930	22,982.4	25,603.2	- 2,620.8	1.11
1931	17,827.2	18,772.8	945.6	1.05
1932	17,630.4	17,721.6	91.2	1.01
1933	17,097.6	19,209.6	2,112.0	1.12
1934	18,105.6	21,532.8	3,427.2	1.19
1935	19,747.2	20,985.6	- 1,238.4	1.06
1936	24,220.8	27,187.2	- 2,966.4	1.12
1937	27,840.0	35,836.8	- 7,996.8	1.29
1938	29,798.4	35,496.0	- 5,697.6	1.19
1939	26,712.0	34,761.6	- 8,049.6	1.30
1940	46,192.1	45,092.1	+ 1,100.0	0.98
1941	47,295.8	57,485.6	-10,189.8	1.22
1942	47,129.1	55,094.5	- 7,965.4	1.17
1943	42,030.8	59,788.8	-17,758.0	1.42
1944	54,106.3	68,988.5	-14,882.2	1.27
1945	18,729.6	65,030.4	-46,300.8	3.47
1946	46,315.2	75,403.2	-29,088.0	1.63
1947	65,107.2	118,780.8	-53,673.6	1.82
1948	132,627.1	131,822.3	+ 804.8	0.99
1949	138,396.5	154,214.8	-15,818.3	1.11
1950	177,592.2	169,226.0	+ 8,366.2	0.95
1951	214,507.2	218,639.4	- 212.3	1.02
1952	231,100.0	243,900.0	-12,800.0	1.06
1953	257,600.0	236,300.0	+21,300.0	0.92
1954	262,900.0	249,500.0	+13,400.0	0.95
1955	286,500.0	294,700.0	- 8,200.0	1.03
1956	331,200.0	301,800.0	+29,400.0	0.91
1957	394,600.0	356,200.0	+38,400.0	0.92
1958	427,100.0	412,492.6	+14,607.4	0.97
1959	451,300.0	448,600.0	+ 2,700.0	0.99
1960	490,400.0	504,600.0	-14,200.0	1.03
1961	631,400.0	584,600.0	+46,800.0	0.93
1962	592,704.1	606,370.7	-13,666.6	1.02
1963	640,471.0	647,186.1	- 6,715.1	1.01
1964	699,907.4	751,417.7	-51,510.3	1.05
1965	691,274.6	817,830.7	-126,556.1	1.13
1966	736,006.9	778,611.4	-42,604.5	1.06
1967	765,777.3	725,342.1	+40,435.2	0.95
1968	930,142.0	838,142.0	+92,000.0	0.90

Source: Tables II, XIV.

Notes: These statistics are in places at variance with other published sources but the differences are not of such a magnitude to affect the picture seriously. Only Exports for 1945 has elsewhere been expressed as

1929	28,449.6	28,473.6	- 24.0	1.00
1930	22,982.4	25,603.2	- 2,620.8	1.11
1931	17,827.2	18,772.8	945.6	1.05
1932	17,630.4	17,721.6	91.2	1.01
1933	17,097.6	19,209.6	2,112.0	1.12
1934	18,105.6	21,532.8	3,427.2	1.19
1935	19,747.2	20,985.6	- 1,238.4	1.06
1936	24,220.8	27,187.2	- 2,966.4	1.12
1937	27,840.0	35,836.8	- 7,996.8	1.29
1938	29,798.4	35,496.0	- 5,697.6	1.19
1939	26,712.0	34,761.6	- 8,049.6	1.30
1940	46,192.1	45,092.1	+ 1,100.0	0.98
1941	47,295.8	57,485.6	-10,189.8	1.22
1942	47,129.1	55,094.5	- 7,965.4	1.17
1943	42,030.8	59,788.8	-17,758.0	1.42
1944	54,106.3	68,988.5	-14,882.2	1.27
1945	18,729.6	65,030.4	-46,300.8	3.47
1946	46,315.2	75,403.2	-29,088.0	1.63
1947	65,107.2	118,780.8	-53,673.6	1.82
1948	132,627.1	131,822.3	+ 804.8	0.99
1949	138,396.5	154,214.8	-15,818.3	1.11
1950	177,592.2	169,226.0	+ 8,366.2	0.95
1951	214,507.2	218,639.4	- 212.3	1.02
1952	231,100.0	243,900.0	-12,800.0	1.06
1953	257,600.0	236,300.0	+21,300.0	0.92
1954	262,900.0	249,500.0	+13,400.0	0.95
1955	286,500.0	294,700.0	- 8,200.0	1.03
1956	331,200.0	301,800.0	+29,400.0	0.91
1957	394,600.0	356,200.0	+38,400.0	0.92
1958	427,100.0	412,492.6	+14,607.4	0.97
1959	451,300.0	448,600.0	+ 2,700.0	0.99
1960	490,400.0	504,600.0	-14,200.0	1.03
1961	631,400.0	584,600.0	+46,800.0	0.93
1962	592,704.1	606,370.7	-13,666.6	1.02
1963	640,471.0	647,186.1	- 6,715.1	1.01
1964	699,907.4	731,417.7	-31,510.3	1.05
1965	691,274.6	817,830.7	-126,556.1	1.18
1966	736,006.9	778,611.4	-42,604.5	1.06
1967	765,777.3	725,342.1	+40,435.2	0.95
1968	930,142.0	838,142.0	+92,000.0	0.90

Source: Tables II, XIV.

Notes: These statistics are in places at variance with other published sources but the differences are not of such a magnitude to affect the picture seriously. Only Exports for 1945 has elsewhere been expressed as approximately 357 million. The data for the years 1952-1962 has been rounded to the nearest hundred thousand.

coincided with the era of highest growth, as is seen in Table XXV. The present picture is one in which the favourable balance and terms of trade depends on the extent to which petroleum exports exceed crude petroleum imports.

CHAPTER III

THE MAIN DETERMINANTS AND CONSEQUENCES OF GROWTH

The Characteristics of the Trinidad Economy

As the discussion has so far revealed, petroleum and an emerging chemical industry dominate Trinidad's export sector with plantation agriculture playing a subordinate role. The extent to which Domestic product is generated by exports of goods and services and reduced by imports of goods and services are demonstrated in Table XIX. This is by no means unique to Trinidad as indeed several advanced countries including Canada and Japan have the same feature. In less developed countries, and many find themselves in this predicament, the consequences are notorious. Their economies have not undergone the structural transformation of their advanced counterparts so that they are more vulnerable to the vicissitudes of external demand. Many of the present day advanced economies were able to develop their exports at the time that they did, because demand conditions were then more favourable, and there were fewer trading blocs.[1] Kindleberger has pointed out that the popular example of Japan, is a prototype of this argument. Exports were in fact, a balancing factor in the country's economic growth. On the one hand,

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[1] William G. Demas, op. cit., p. 83. Structural transformation here implies that the economy has acquired a continuing capacity to adapt and apply innovations and there is domestic economic interdependence. See Kindleberger, op. cit., Chapter 7.

TABLE XIX

EXPORTS AND IMPORTS OF GOODS AND SERVICES AS PROPORTIONS OF GROSS DOMESTIC PRODUCT 1951-1968 ($TT mill.)

Year	G.D.P. at Market Prices	Exports	X / G.D.P.	Imports	M / G.D.P.
1951	331.7	218.6	65.9	214.5	64.6
1952	364.3	257.7	70.7	263.2	72.2
1953	408.0	286.1	70.1	257.2	63.0
1954	436.0	292.7	67.1	273.5	62.7
1955	505.6	318.9	63.1	318.3	63.0
1956	589.9	370.6	62.8	328.2	55.6
1957	695.2	445.0	64.0	391.0	56.2
1958	763.5	482.0	63.1	446.1	58.4
1959	846.2	506.5	59.9	487.6	57.6
1960	918.3	551.7	60.1	562.2	61.2
1961	1,002.8	697.7	69.6	648.9	64.7
1962	1,061.7	699.2	65.9	680.6	64.1
1963	1,162.7	746.1	64.2	705.8	60.7
1964	1,220.4	814.5	66.7	792.1	64.9
1965	1,262.7	815.1	64.6	875.5	69.3
1966	1,398.4	867.0	62.0	845.9	60.5
1967	1,511.1	892.0	59.0	812.3	53.8
1968	1,533.3	930.1	60.6	838.1	54.7
Average 1951-1968			64.4		61.5

Sources: C.S.O., National Income of Trinidad & Tobago, 1951-1961 (Port-of-Spain, 1962).
_____, National Income of Trinidad & Tobago, 1952-1962 (Port-of-Spain, 1964).
_____, Annual Statistical Digest 1967, (Port-of-Spain, 1968).
Gov't of Trinidad-Tobago, Draft Third Five Year Plan 1969-1973 (Port-of-Spain, 1968).

demand conditions were favourable to permit an expansion of silk exports. On the other hand, effective organization in the cotton textile industry enabled Japanese manufacturers to expand their exports in competition with Britain.[2] In the case of the small untransformed

[2]Charles P. Kindleberger, Foreign Trade and the National Economy (New Haven, 1961), p. 206.

economy, there tends to be heavy exports of minerals, raw materials or other resource products experiencing favourable demand conditions in world markets. In the other case of the transformed mature economy with a high ratio of exports to G.D.P., exports tend to consist either of primary and processed agricultural products (New Zealand and Denmark) or manufactured products (Switzerland, Belgium, and Hong Kong). Because demand conditions are today often unfavourable for primary products, they cannot be relied on to provide rapid economic growth. Only minerals or manufactures can provide satisfactory growth for the small untransformed economy.[3] This leads to a situation which can be summarized in the following quote:

> economic dependence usually springs from dependence on foreign trade but countries with equal trading ratios are not equally dependent.[4]

However, it is noticeable from Table XIX that the ratios of $\frac{X}{G.D.P.}$ and $\frac{M}{G.D.P.}$ are declining, which indicates that the rest of the economy is beginning to play a greater role in the domestic product. Indeed, there is increasing production for the domestic market. Trinidad like several other mineral exporters, has been fortunate enough to experience rapid export growth since World War II. This growth has provided the means for a vigorous attack on socio-economic problems; the results of which have so far been encouraging.

Many of the socio-economic obstacles to development have seen

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[3]Demas, op. cit., pp. 82-83.

[4]W. Arthur Lewis, "Economic Development and World Trade" in E.A.G. Robinson (ed.), Problems in Economic Development (New York, 1965), p. 485.

great improvement since World War II. Literacy for instance, among the total population 5 years and over increased from 64 per cent in 1931 to 74 per cent in 1946 and by 1960, only 11.4 per cent of the population 15 years and over had no education.[5] By 1968, university and secondary education were free with primary education compulsory, and since 1956, secondary school enrolment had quadrupled.[6] But, the population is extremely young with more than 61 per cent of the estimated 1968 population less than 25 years of age.[7] This creates a burden of public expenditure on human resources and development. Added to this, malaria and tuberculosis among other diseases typical of a tropical climate have been combated and controlled to the extent that the death rate has declined from 13.7 per thousand in 1946 to 6.7 in 1967.[8] Fortunately, the birth rate has shown signs of decline since 1964 and a family planning programme has been extended in the third five year plan.[9] The supply of infrastructure has also increased appreciably, although there is room for much more. Since 1958, a nation-wide sewerage scheme has been constructed. There have been new roads and improvements to existing ones, extension of electricity and telephone services, and much needed, though still inadequate, additions to the supply of lower and middle income

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[5] C.S.O., Annual Statistical Digests and Caribbean Economic Almanac, op. cit., p. 191.

[6] Gov't of Trinidad & Tobago, Draft Third Five Year Plan, op. cit., p. 332.

[7] C.S.O. Annual Statistical Digest 1968 (Port-of-Spain, 1969), p. 17.

[8] Ibid., p. 24 and Annual Statistical Digest 1962, pp. 24-28.

[9] Draft Plan, op. cit., p. 372.

housing units.

With the rapid expansion of exports, national income, and per capita income, the distribution of income has improved remarkably. It has recently been demonstrated that the distribution of Trinidad's income has shown great similarity to the income distribution in West European countries, such as the Scandinavian countries, Netherlands and Germany. In the latter, the 60 per cent of households with the lowest incomes had about 29 per cent of the share of total income in the 1950's. In Trinidad, the share of the same group of households was 27 per cent in 1957/58.[10] In general, the economy has performed well, especially since 1948, except for the nagging problem of increasing unemployment and underemployment. Before examining the process of growth in the economy, it is important to remember that the period 1928 to 1948 includes the destabilizing influences of both the world depression and World War II and its consequences. Our choice of such a period was, however, influenced by the fact that it witnessed the transformation of the economy from an agricultural to a mineral one. Our discussion here will, therefore, be confined to the post 1948 period, as it contained the era of rapid economic growth and because a good set of national income data became available then.

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[10] E. Ahiram, "Distribution of Income in Trinidad and Tobago and Comparison with Distribution of Income in Jamaica", Social and Economic Studies, Vol. 15, No. 2 (ISER, 1966), p. 106.

Export-Led Growth

To evaluate the importance of trade in the growth of the Gross National Product, a test of significance was undertaken between G.N.P. and exports and its components. As Table XX shows, very high correlation coefficients were obtained for exports and petroleum exports in particular. These were significant at the 5 per cent level. As expected, agricultural exports were found to be insignificant. In other words, a heavy reliance on export trade, more precisely petroleum exports, has been the prominent feature in changes in the Gross National Product. Evidence in Table XXI further points out that exports is not only a very large proportion of G.N.P., but it is also greater than the sum of the proportion of investment and government expenditures. This implies that the growth of national income is not under national control, since as we pointed out, the export sector is foreign-owned. In Table B in our appendix, the global situation is depicted, and our cursory observation is that the more mature countries tend to be less dependent on trade. On the other hand small countries both advanced and underdeveloped must depend on trade, since import substitution on a very wide scale is limited by the size of the domestic market. The traditional argument regarding this state of affairs is that I and G depend on X in an export economy, in contrast to the developed economy where they may be larger and independent. In this case, foreign trade tends to stabilize economic activity, whereas in the underdeveloped export economy its influence is destabilizing.[11]

On the other hand, important empirical evidence in a study of 50 countries has demonstrated that there is a strong causal

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[11]Kindleberger, op. cit., pp. 219-221.

TABLE XX

CORRELATION BETWEEN G.N.P. AND EXPORTS, AND CORRELATION BETWEEN G.D.P. AND MAIN ITEMS OF EXPORT TRADE 1951-1967

(1) Variables	(2) r = Correlation Coefficients	(3) Regression Equations
G.N.P./Exports (X)	0.9901	Y = -19.82 + 1.42 X
G.D.P./Petroleum Exports (X pet.)	0.9861	Y = 6.72 + 2.23 Xpet.
G.D.P./cocoa,sugar exports (X c,s)*	0.6284	Y = -639.14+35.44 X c,s

Source: See Table XIX.
*1952-1968.

TABLE XXI

RELATIVE SIZES OF EXPORTS (X), GOVERNMENT EXPENDITURE (G), INVESTMENT (I), CONSUMPTION (C), AND IMPORTS (M) AS PROPORTIONS OF G.N.P. (Y), 1951-1967

	$\frac{X}{Y}$	$\frac{G}{Y}$	$\frac{I}{Y}$	$\frac{C}{Y}$	$\frac{M}{Y}$
1951	0.72	0.17	0.28	0.76	0.71
1952	0.75	0.18	0.28	0.80	0.77
1953	0.76	0.18	0.23	0.73	0.69
1954	0.72	0.18	0.22	0.80	0.67
1955	0.68	0.17	0.25	0.83	0.68
1956	0.71	0.17	0.24	0.81	0.63
1957	0.76	0.15	0.29	0.80	0.67
1958	0.71	0.19	0.31	0.77	0.66
1959	0.70	0.23	0.34	0.79	0.67
1960	0.67	0.19	0.34	0.76	0.68
1961	0.79	0.23	0.29	0.79	0.75
1962	0.74	0.22	0.31	0.79	0.72
1963	0.75	0.23	0.27	0.86	0.71
1964	0.79	0.26	0.27	0.89	0.77
1965	0.71	0.22	0.23	0.86	0.76
1966	0.69	0.21	0.24	0.87	0.68
1967	0.67	0.20	0.22	0.85	0.61

Source: See Table XIX.

relationship between exports and economic growth. The author, Robert Emery, points out that developing countries eager to increase their growth rates should adopt policies to stimulate exports. It is also argued that exports help concentrate investment in the more efficient sectors of the economy, thereby raising productivity. In addition, profitable export industries are seen to be influential in stimulating additional investment, improving technology, managerial skills and stimulating increased consumption.[12] This contention has important truths for Trinidad, in that the petroleum industry has been credited with the latter role of improving technology, skills and increasing consumption.[13] It is also demonstrated below (Table LXXIX), that productivity in the petroleum industry is several times that of any other sector in the economy, and as such, can be called the most efficient sector of the economy.

Further observation of Table XXI above, reveals that the proportion of consumption to income and the proportion of imports to income are quite high. This implies that savings are low and that the leakages in the income streams through imports are aggravated by large consumption expenditures. In other words, there is very little domestic capacity to transform the economy by means of domestic capital accumulation. More evidence of this is seen in Table XXII where observations of marginal changes in the proportions of

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[12]Robert F. Emery, "The Relation of Exports and Economic Growth", Kyklos, Vol. XX, 1967 (Basel, 1967), pp. 470-484.

[13]Ministry of Planning and Development, Trinidad and Tobago: Hub of the Caribbean (Port-of-Spain, 1967), p. 20.

TABLE XXII

MARGINAL CHANGES IN CONSUMPTION (C), INVESTMENT (I), AND IMPORTS (M), EXPRESSED AS A PROPORTION OF MARGINAL CHANGES IN (G.N.P.) INCOME (Y)

Year	$\frac{\Delta C}{\Delta Y}$	$\frac{\Delta I}{\Delta Y}$	$\frac{\Delta M}{\Delta Y}$
1952	0.86	0.23	0.72
1953	0.55	0.27-	0.19-
1954	0.96	0.17	0.49
1955	0.71	0.38	0.71
1956	0.64	0.20	0.20
1957	0.71	0.72	0.96
1958	0.60	0.38	0.63
1959	1.04	0.79	0.76
1960	0.65	0.36	0.74
1961	0.92	0.50-	1.46
1962	0.79	0.70	0.53
1963	2.63	0.66-	0.00
1964	1.74	0.18	2.83
1965	0.61	0.38	0.66
1966	0.92	0.35-	0.31-
1967	0.56	0.04	0.37-
Average 1952-1967	0.93	0.17	0.61

Source: Table XIX.

consumption, investment, and imports to income are presented. For reasons mentioned before, we cannot assume that I is independent, nor do we attempt here to get into the controversial subject of consumption functions. However, our observations give a good indication of the major fact of the country's economic life; namely, a high propensity to import coexists with a high propensity to consume. In three years, 1959, 1963 and 1964, the increases in "the propensity to consume" exceeded unity. This may be attributable to windfall gains in the public sector causing the "consumption function to shift up". In these years, there were across the board wage increases and retroactive pay in the public sector, following the recommendations of the Collette and Clapp report.

It must be pointed out that much of the country's import expenditure is highly essential to its economic growth, owing to the structure of the petroleum industry with its need for large crude oil

imports, and the necessary capital imports of secondary industries. Provisional estimates for 1969 have shown that these two items accounted for over 60 per cent of total imports. In comparison, food and imports of manufactures accounted for only 23 per cent.[14] In this light, it would seem that short term reduction of the import bill would depend to a large extent on what reductions can be achieved in the latter two items. Some progress has been made in this direction, as production for the domestic market has grown from $113 millions in 1951 to $603 millions in 1968 or from 33 per cent of G.D.P. to 40 per cent. In Table XXIII we have derived this data from subtracting imports from the Gross Domestic Product. The results here are especially encouraging since, with the slowing down of the rate of expansion of the economy since 1961 (see Table XXV), it is observed that the rate of production for the domestic market has increased even more from 10.57 per cent between 1955-1961 to 13.96 per cent between 1961-1968. This is a good indication that the domestic economy is participating in the growth process.

National income growth depends largely on activity in the external sector and specifically the petroleum sector. Moreover, with a large proportion of exports to the Gross Domestic Product and the lack of diversity of the export base, then it should become clear that the territory is extremely vulnerable to changes in demand of its main export customers. We have below calculated the index of earnings of the major export commodities to indicate the degree of

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[14] C.S.O., Quarterly Economic Report Oct.-Dec. 1969, (Port-of-Spain, 1970), pp. 2-3.

TABLE XXIII

PRODUCTION FOR THE DOMESTIC MARKET COL. (2) AND ITS ANNUAL AVERAGE RATE OF GROWTH 1951-1968

Year	Exports Goods & Services	Gross Domestic Product (at market prices) minus Exports goods & service	Imports Goods & Services
1951	218.6	331.7 - 218.6 = 113.1	214.5
1952	257.7	364.3 - 257.7 = 106.6	265.2
1953	286.1	408.0 - 286.1 = 121.9	257.2
1954	292.7	436.0 - 292.7 = 143.3	273.5
1955	318.9	505.6 - 318.9 = 186.7	318.3
1956	370.6	589.9 - 370.6 = 219.3	328.2
1957	445.0	695.2 - 445.0 = 250.2	391.0
1958	482.0	763.5 - 482.0 = 281.5	446.1
1959	506.5	846.2 - 506.5 = 339.7	487.6
1960	551.7	918.3 - 551.7 = 366.6	562.2
1961	697.7	1,002.8 - 697.7 = 305.1	648.9
1962	699.2	1,061.7 - 699.2 = 362.5	680.6
1963	746.1	1,162.7 - 746.1 = 416.6	705.8
1964	814.5	1,220.4 - 814.5 = 405.9	792.1
1965	815.1	1,262.7 - 815.1 = 447.6	875.5
1966	867.0	1,398.4 - 867.0 = 531.4	845.9
1967	892.0	1,511.1 - 892.0 = 619.1	813.3
1968	930.1	1,533.3 - 930.1 = 603.2	838.1
Rate of Growth of Col. (2)		1951-1955 - 16.2% per annum 1955-1961 - 10.57% 1961-1968 - 15.96%	

Source: Same as Table XXI.

fluctuation in the earnings of these items. The overall average fluctuation for 1948-1968 (see Table XXIV) of all items are high particularly Asphalt and Petroleum. As the indexes show, petroleum's high fluctuations are due solely to a high and steady increase in earnings. On the other hand, Asphalt has experienced violent fluctuations as have cocoa and sugar, particularly the former. This is also demonstrated by a comparison of figures 2 and 3 in our appendix. The instability associated with primary export commodities

CUBA TODAY

VOLUME INDEXES OF MAIN EXPORTS AND AVERAGE FLUCTUATIONS
1948-1968 (average of period = 100)

Year	Sugar	Cocoa	Petroleum	Asphalt
1948	59	98	---	---
1949	56	52	27	83
1950	56	98	34	143
1951	58	135	42	217
1952	64	95	46	143
1953	82	136	51	159
1954	90	176	50	202
1955	98	137	56	164
1956	81	122	70	152
1957	106	100	83	171
1958	96	148	93	31
1959	101	117	99	36
1960	114	101	107	40
1961	133	76	135	47
1962	105	93	135	52
1963	157	100	144	57
1964	151	57	157	71
1965	133	50	154	55
1966	120	50	159	62
1967	119	63	162	59
1968	143	94	198	55
Average Fluctuation				
1948-1952	12	22	5	35
1953-1957	10	14	19	8
1958-1962	10	19	15	16
1963-1968	10	37	7	8
1948-1968	27	26	45	55

Source: Computed from C.S.O., Annual Statistical Digests, sundry years. The basis of comparison is the total period for which data is shown for each product which is = 100.

$$\text{Average fluctuation or A.D.} = \frac{\sum_{j=1}^{n} |x_j - 100|}{n}$$

where x_j is the volume index for each product and n the number of years.

are clearly in evidence in sugar and cocoa export earnings. This is in spite of the fact that sugar has benefited from a protected market mentioned earlier. This means that petroleum is not only the largest export item, but the most reliable as well.

The impasse posed by the heavy dependence on one export commodity and the low capacity to save has prompted the following view from W. Arthur Lewis:

> We need for development purposes something like an extra 5 or 6% of national income in order to add something like 2% per annum to our present rate of growth . . . . The national income per head is actually increasing. So all we need do is to stop consumption per head increasing so rapidly for a while . . . . How would we get hold of this 6%? By taxation. It cannot be done simply by making propaganda urging people to save. It could be done by increasing the level of taxation and using proceeds for capital formation.[16]

The point of checking the rate of increase in consumption by means of increased taxation is a very valid argument in our case. But its vigorous application has been constrained by the fact that much of the corporate structure is enjoying incentive tax holidays, and the obvious reluctance of government to make a politically unpopular move. As well, these incentives are a necessary inducement to invest. The result is that net indirect taxes are less than one per cent of national income (Table XXXIII).

It is perhaps appropriate at this point to illustrate and evaluate the rates of increase of the main income variables. Table XXV shows us that every major item of significance to the national income has suffered serious decline since 1961, although current rates of growth are still quite high. Clearly, 1955-1961 was the period of

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[16] W.A. Lewis, "Employment Policy in an Underdeveloped Area", Social and Economic Studies, Vol. 7, No. 3, Sept. 1958 (I.S.E.R., 1959), pp. 53-54.

TABLE XXV

AVERAGE ANNUAL RATES OF GROWTH OF NATIONAL PRODUCT AND ITS MAIN COMPONENTS (percentages)

Variables	1951-1955	1955-1961	1961-1968	1951-1968
Private Consumption	15.10	13.13	10.26*	25.21/
Gross Domestic Capital - Formation	8.65	20.16	2.66*	20.97
Government Expenditure	12.55	25.75	7.27	28.07
Exports	8.36	20.00	6.75	19.14
Imports	8.68	16.39	6.20	17.10
Petroleum Exports	6.65	23.33	6.67	21.92
Sugar Exports	17.05	5.91	1.03	7.27
Cocoa Exports	0.43	-7.50	3.47	-1.68
G.D.P. at Current Prices	13.10	16.38	8.44*	22.99
National Income	13.13	14.44	8.89*	21.04/
G.N.P. at Market Prices	13.68	14.78	8.49*	21.29/
Government Revenue	9.60	13.42	5.70[a]	27.93

Source: Tables X, XXIV.

Notes: *1961-1967
/ 1951-1967
a 1962-1967. The data for 1961 and 1968 are biased by very large increases and decreases over the previous respective years.

highest growth with exports averaging 23.33 per cent and G.D.P., N.I. and G.N.P. averaging 16,30 per cent, 14.44 per cent and 14.78 per cent respectively. By any standards, these rates are phenomenal, but the inevitable close correlation between exports, petroleum exports and G.N.P. are again evident. It is noteworthy, however, that the rate of growth of private consumption has not reduced with the same force as the other variables in the latter period. Demas has attributed this to the fact that through historical association with the western world and close proximity to the North American Continent, Caribbean countries--perhaps more than other areas--have been overcome by the international demonstration effect. "Consumption

functions", he argues, "have been pushed upwards" and Caribbean consumers are showing a strong desire to emulate their North American counterparts.[17] This is generally true throughout the area. Another observation of Table XXV is the drastic reduction in the rate of capital formation, from 20.16 per cent to 2.66 per cent. Actually data reveals that approximately 1/3 of this capital originates in the petroleum sector (Table XXXIII), thus declines in the latter's rate are communicated with some force to capital formation as a whole. Total exports, petroleum exports and income have also declined. Yet a rate of growth of over 8 per cent is still remarkable for a developing country. The country's situation fits Robert Emery's arguments admirably as she is, at one and the same time, among the fastest growing and most dependent world economies.[18]

A Note on Imports

An equally important role is played by imports in the general economy. A strong correlation yielding a correlation coefficient of 0.9844 and a regression equation of Y = 21.21 + 1.41 M was found between G.N.P. and imports over the period 1952-1967. This strong relationship between imports and G.N.P. is seen to be structurally associated with crude petroleum imports. Proof of this was shown by an input/output table of the economy which revealed that petroleum

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[17]William G. Demas, Economics of Development, op. cit., pp. 97-98.

[18]Recall Robert Emery, op. cit., had demonstrated that rapid growth of G.N.P. was strongly correlated with an expansion of exports, and see Table B in the appendix.

had the highest input coefficient (.5930) deriving from imports.[19] The result is the familiar concept that economic growth has depended significantly on the volume of imported crude petroleum as well.

The important role played by crude petroleum imports in the post-war era and particularly since 1965 is demonstrated in Table XIV. Every year since 1961, it has accounted for over 45 per cent of imports, soaring to a record high of 53.08 per cent in 1968. Its share of imports have doubled between 1957 and 1968. It is also clear on the import side that production for the domestic market has increased remarkably, as the importation of manufactured articles have declined steadily since 1951 (also Table XIV). Another important item of imports is machinery, which is conceivably used for further production. This item has fluctuated throughout the post-war period, (Table XIV) which further emphasizes that the growth process is generated more by the external sector than by domestic production.

Population Growth

Table XXVI describes the population by ethnic group at the 1960 census. The total of 827,957 for 1960, represents an increase of 203 per cent from 273,900 in 1901. However, this rate of growth has not been uniform as is demonstrated in Table XXVII. Among the ethnic groups, East Indians are indicated to have the highest fertility as measured by gross reproduction rates among the

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[19] A.A. Francis, "A Note on Inter-Industry Relations in the Economy of Trinidad and Tobago, 1962", C.S.O. Research Papers, No. 2, December, 1965 (Port-of-Spain, 1965), pp. 60-61.

TABLE XXVI

POPULATION BY ETHNIC GROUPINGS 1960 CENSUS

Total	African	East Indian	White	Chinese	Mixed	Lebanese Syrian	Others
827,957	358,588	301,946	15,718	8,361	134,749	1,590	7,005
100%	43.5%	36.5%	2.0%	1.0%	16.0%	0.2%	0.7%

Source: C.S.O., Annual Statistical Digest 1968 (Port-of-Spain, 1970), p. 13.

TABLE XXVII

GROWTH OF POPULATION FOR CENSUS PERIODS 1851-1968

Inter-Censal Period	No. of Yrs. Interval	Total Population at End of Interval	Total Growth	Annual Rate of Growth (%)
1851-1861	10	99,848	16,870	1.87
1861-1871	10	126,692	26,844	2.41
1871-1881	10	171,179	44,487	3.06
1881-1891	10	218,381	47,202	2.46
1891-1901	10	273,899	55,518	2.29
1901-1911	10	333,552	59,653	1.99
1911-1921	10	365,913	32,361	0.92
1921-1931	10	412,783	46,870	1.21
1931-1946	15	557,970	145,187	2.03
1946-1960	14	827,957	269,987	2.87
1960-1968[a]	8	1,020,550	192,593	2.09

Source: Jack Harewood, "Population Growth of Trinidad and Tobago in the Twentieth Century", Table 1.
C.S.O., Annual Statistical Digest 1968 (Port-of-Spain, 1970), p. 17.

[a]The population shown for 1968 is a mid-year estimate.

general population. Marewood has shown that the gross reproduction rate among East Indian women was 24 per cent higher than the general population in 1921, 37 per cent higher in 1931, and 25 per cent higher in 1946. Despite the significant increase in fertility of the general population, this difference was maintained in 1957.[25] This is the only significant difference as between ethnic groups and the composition of the population. For our relevant period since 1946, the high growth rate of 2.87 per cent up to 1960 has been attributed to improvements in health facilities with its concomitant decrease in death rates relative to birth rates. The marked decrease since 1960, on the other hand, has been explained by a number of factors including: improvements in education and the standard of living, increased urbanization, the promotion of family planning and partly emigration.[26] In general, we can say that genuine progress has been made in restricting population growth, particularly since 1960. Both the birth rate and the rate of natural increase have declined dramatically since then. This is borne out in Table XXVIII. One is tempted to associate this circumstance with the generally high rates of economic growth and the association may indeed be valid, despite the fact that income growth has declined since 1961. It would appear that the rising expectations brought about by economic growth and

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[25]Jack Marewood, "Population Growth in Trinidad and Tobago in the Twentieth Century", Social and Economic Studies, Vol. 12, No. 1, March, 1963 (Jamaica, 1963), pp. 18-19. This is also true of Guyana, another country in the area with a significant Indian population. See W.L. David, Economic Development of Guyana 1953-1964 (Oxford, 1969), pp. 51-52.

[26]Gov't of Trinidad and Tobago, Third Five Year Plan, op. cit., p. 99.

increased education have aided in the success of family planning and thus, fostered the conditions for a reduced rate of population growth.

TABLE XXVIII

NATURAL INCREASE OF POPULATION 1954-1968

Year	Birth Rate per 1,000	Death Rate per 1,000	Rate of Natural Increase
1954	41.9	9.8	32.1
1955	41.9	10.4	31.5
1956	36.9	9.6	27.3
1957	37.7	9.5	28.2
1958	37.6	9.2	28.4
1959	37.4	9.1	28.3
1960	39.1	7.9	31.2
1961	37.9	7.9	28.0
1962	37.9	7.1	30.8
1963	35.6	7.2	28.4
1964	34.7	7.0	27.7
1965	32.8	6.9	25.9
1966	30.2	7.1	23.1
1967	28.9	6.7	22.2
1968	N.A.	N.A.	N.A.

Source: C.S.O., Annual Statistical Digests, 1962, 1968.

Labour and Employment

Between 1946 and 1960 the population grew at an annual average rate of 2.87 per cent, while the labour force grew at 2.47 per cent. Since then and up until 1968, while the population growth has declined to 2.09 per cent, that of the labour force has increased to 3.45 per cent.[27] In the first instance, increased school attendance has

[27] Draft Plan, op. cit., p. 176 and Table XXVII.

reduced the general worker rate,[28] but since 1960 it appears that other economic and demographic factors have reversed the position. For one, the population of working age has been rising at a rate of some 18,000 a year, reflecting the high fertility of the 1950's. What is more, we know that net migration has not been significant as in other Caribbean countries,[29] so that the labour participation rate has increased.[30]

Superficially, the Lewis dictum that in poor communities sixty or seventy per cent of the people are needed in agriculture to procure food; whereas economic growth reduces this proportion by releasing more people for other activities, seems to have taken place.[31] As we can see from Table XXIX, the proportion of the labour force in agriculture has declined from 29.8 per cent in 1946 to 20.3 per cent in 1968. In comparison to many less developed countries, this percentage is quite low. But it seems unlikely that this reduction is due purely to economic growth. Between 1931-1946 the decline in male agricultural population of from 60,000 to 43,000 has been matched by a female reduction of from 20,000 to less than 11,000. This has been attributed to the fact that the war-time situation created more lucrative alternatives as three U.S. Naval bases were established on

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[28]Jack Harewood, "Employment in Trinidad and Tobago in 1960", C.S.O. Research Papers, No. 1, Dec. 1963 (Port-of-Spain, 1963) pp. 22-23 et passim.

[29]Jamaica, for instance, had 189,609 people emigrating to England between 1954-1964. See Central Planning Unit of Gov't of Jamaica, Economic Survey 1964 (Kingston, 1964), p. 42.

[30]Dudley Seers, "A Step Towards a Political Economy of Development: Trinidad & Tobago", Social and Economic Studies, Vol. 18, No. 3, September, 1969 (Jamaica, 1969), p. 232.

[31]W. Arthur Lewis, The Theory of Economic Growth (Homewood, 1955), p. 422. It is also true that the appeal of higher wages in the modern sector is important here.

TABLE XXIX

LABOUR FORCE BY INDUSTRY GROUP (percentages)

Industry Group	1946	1960	1968
TOTAL ALL INDUSTRIES	100.0	100.0	100.0
Agriculture, forestry, fishing, hunting	29.8	22.8	20.3
Mining and Quarrying	4.2	6.5	17.1*
Manufacturing	13.2	13.6	N.A.
Construction	14.4	15.0	14.6
Commerce	8.0	12.1	13.9
Transport, Storage andCommunications	7.7	7.8	6.8
Services	17.7	17.2	24.1

Source: Jack Harewood, "Employment in Trinidad & Tobago 1960", (Port-of-Spain, 1963), p. 75.
C.S.O., Quarterly Economic Report, Oct.-Dec. 1969, (Port-of-Spain, 1970), p. 28.

* Includes manufacturing. In 1968, 3.2% never worked.

the island.[32] Since 1946, with the spread effects of the war petering out, a return to agriculture was experienced up until 1955.[33] Thereafter, the general decline has been spear-headed by structural changes in the sugar industry. Bearing in mind that our data for agriculture includes forestry, fishing, and hunting, agriculture net of the latter is dominated by sugar both in value added and employment. Table XXX shows us that between 1956 and 1966, the sugar industry has displaced almost 4,000 workers, the contention being made by the industry that mechanization would increase productivity and "competitiveness".[34] This has had a contractionary effect on

[32] Jack Harewood, "Employment in Trinidad & Tobago", op. cit., p. 74.

[33] _____, "A Comparison of Labour Force Data in Trinidad and Tobago 1946-1964", C.S.O. Research Papers, No. 2, Dec. 1965 (Port-of-Spain, 1965), p. 28.

[34] See Havelock Brewster, Wage-Policy Issues in an Underdeveloped Economy: Trinidad & Tobago, op. cit., pp. 39-41 where these terms of reference are questioned.

TABLE XXX

EMPLOYMENT IN LARGE ESTABLISHMENTS 1956-1966 (000's)

Industry Group	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Sugar Factories	3.2	3.3	3.2	3.2	3.7	3.4	3.0	3.1	3.3	3.4	3.3
Sugar Estates	12.2	11.6	12.4	12.0	10.3	9.1	8.6	9.1	10.4	8.9	8.4
Oil & Asphalt Mining & Refining	17.2	17.6	16.7	16.3	15.7	14.8	14.7	14.8	14.7	15.0	15.0
Government Services	31.8	33.8	33.4	35.0	36.7	49.7	41.3	42.3	51.4	51.2	48.7
Transport, Storage & Communications	11.4	12.5	12.8	12.1	11.4	11.4	12.4	12.4	12.5	12.4	11.7
Services incl. Commerce	15.2	17.3	18.4	19.5	26.0	25.5	20.7	24.1	22.3	23.1	23.4
Building & Construction	5.1	4.9	5.2	5.9	6.0	3.9	4.4	6.2	6.1	4.9	4.9
Other incl. Quarrying	7.9	8.3	9.7	10.5	4.8	3.7	6.6	11.6	12.5	14.5	14.9
Wearing Apparel	1.3	1.8	1.9	1.9	1.9	2.1	2.2	2.8	2.8	3.2	3.4
Food, Drink & Tobacco	3.1	3.5	3.8	3.8	3.9	3.7	3.6	3.3	4.0	4.6	4.2
Annual % Change all industries	---	5.6%	2.4%	2.4%	0.1%	5.6%	5.9%	12.1%	4.8%	0.8%	-2.2%
TOTAL ALL INDUSTRIES	108.5	114.7	117.5	120.3	120.5	127.3	119.8	134.4	139.9	141.1	137.9

Source: C.S.O., Quarterly Economic Reports, Gov't of Trinidad & Tobago, Port-of-Spain.

employment in agriculture as a whole. In reference to the question of growth, it is noteworthy that while G.D.P. grew at an average annual rate of 16.38 per cent between 1955-61, employment in the sugar industry declined by nearly 3,000 in the same period.

The picture is even more gloomy for the petroleum industry. Table XXX shows that nearly 2,000 jobs were eroded over the same period.[35] It appears that much of the employment in the industry is provided by drilling and exploration, yet production from these operations have nearly doubled between 1955-1965 (see Table IV) although the rate of output has slackened since 1961. With increased imports, mechanization, and some claims of declining profitability,[36] the industry has curtailed employment. In other words, the industry can maintain and increase its output from foreign sources of crude oil, but it is domestic production that creates employment. Since the latter has ceased to be a significant input, we find that high rates of output in the industry can coexist with increasing unemployment.

The two redeeming features of the employment picture are Commerce and the public sector (see Table XXX), although employment in the former is still lower than the 1960 level. Both sectors have shown increases over their 1956 levels. Government services absorbed

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[35] cf. T. Ainsworth Harewood, op. cit., p. 214, has shown that the petroleum industry has eroded 5,300 jobs between 1955-65, while sugar has displaced 3,700, and agriculture as a whole, 8,200. The petroleum situation has been aggravated by B.P. Ltd.'s withdrawal, when an additional 2,000 workers were laid off in 1967. See Economist Intelligence Unit, Quarterly Economic Review for the Caribbean. No. 2, of 1967 (London, 1967), p. 6.

[36] Ibid., p. 6.

almost 17,000 more people and Commerce over 3,000. The failure of the export sectors have placed the burden of job creation on these two sectors particularly the government sector. But there are constraints on the government's ability to provide jobs in adequate numbers. In an economy of this nature, we know that government's ability to provide jobs depends on the inflow of grants and loans on public account, and on the movements in revenue and those of wage rates. We have also seen that revenue has generally tended to move in the same direction with income in the export sector.[37] As a result the supply of government jobs have been lagging precisely when the demand for them has been most pressing.[38] On the other hand, employment in Commerce is restricted by the tiny size of the domestic market. While it can play an important role, it cannot be expected to provide employment in such a volume as to absorb the surplus elsewhere in the economy. And so the government sector is saddled with the problem of increasing unemployment in the face of high but declining economic growth.

The data presented in Table XXXI below has been derived from population censuses of 1946 and 1960, and a series of sample surveys of the labour force between 1963 and the present time.[39] The economically active population has been described as:

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[37]See Table XXV.

[38]Lloyd Best, "The Economy of the British Commonwealth Caribbean: An Overview", in West Indies-Canada Economic Relations, I.S.E.R., University of the West Indies (Jamaica, 1967), p. 7.

[39]Jack Harewood, "A Comparison of Labour Force Data", op. cit., p. 2.

TABLE XXXI

LABOUR FORCE AND EMPLOYMENT 1946-1968 (000' persons)

	1946	1960	1962	1964	1965	1966		1967	1968
1. LABOUR FORCE (a + b)	216	289	325	346	348	357	351	370	368.8
a. Employed	195	252	279	299	300	305	300	313	315.4
male	148	185		210	207	212	209	215	
female	47	67		89	93	93	91	98	
b. Unemployed	21	37		47	48	52	51	57	53.4
seeking work	--	27		31	32	36	35	38	
male	(14)	(19)		(21)	(23)	(26)	(25)	(26)	
female	(7)	(6)		(10)	(9)	(10)	(10)	(12)	
other a	--	10		16	16	16	15	19	
2. NOT IN LABOUR FORCE	137	189		203	214	217	220	221	222.7
3. TOTAL WORKING AGE POPULATION (1 + 2) b	353	478		549	562	574	570	592	591.5
	(AS PER CENT OF LABOUR FORCE)								
1. EMPLOYED	90	87	86	86	86	86	86	85	86
male	69	64		61	59	60	60	58	
female	22	23		25	27	26	26	27	
2. UNEMPLOYED	10	13	14	14	14	14	14	15	14
seeking work	--	9		9	9	9	10	10	
male	(6)	(7)		(6)	(7)	(6)	(7)	(7)	
female	(3)	(2)		(3)	(2)	(3)	(3)	(3)	
other a	--	4		5	5	5	4	5	
c. Not in Labour Force	--	65		59	61	61	63	60	60

Source: Gov't of Trinidad & Tobago, Draft Third Five-Year Plan 1969-1973, op. cit., p. 176.

Notes: a. Also includes persons who at the time of the survey could not work, were temporarily ill, or knew of no suitable jobs.

b. Figures apply to persons 15 years of age and over, for 1946-65; figures for 1966-67, apply to persons 15 years of age and over not in institutions (prisons, Armed services, hospitals, etc.).

c. The method of estimation has changed. The first 1966 column is based on the old method and the second on the new one. See also Jack Harewood, "A Comparison of Labour Force Data in Trinidad and Tobago 1946-64", C.S.O. Research Papers, No. 2, 1965 (Port-of-Spain, 1965), pp. 2-3 for an explanation of definitions and concepts.

> that part of the general population which furnishes the supply of labour for the production of economic goods and services, and it includes: employers, own account workers and unpaid workers, as well as employees; and also includes the unemployed as well as persons actually engaged in these types of work during the period under review.[40]

and the working population has been defined as persons who were working for any length of time during the twelve months preceding the enumeration.[41] Total unemployed is the sum of short term and long term unemployment and therefore embraces all persons who were economically active during the course of the year but who were not working during the week preceding the census enumeration.[42]

The tentative unemployment rate for 1968 was put at 14 per cent, but this does not include underemployment which is known to be heavy, particularly in the export sector. It is noteworthy too, that unemployment increased one percentage point in 1967 over 1966. Three main aspects of unemployment should be mentioned here, as they give some nature of the type of unemployment at hand. First, the heaviest rates of unemployment (30%) are reported to be among young persons aged 15 to 25 years. Second, the highest incidence of unemployment by sectors is found in the construction industry, which showed a 25 per cent ratio in 1962. Third, in terms of educational attainment, the incidence of unemployment was highest among those who had attended secondary school but had not passed the G.C.E. Ordinary Level Examination.[43] On the other hand, the percentage

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[40] Jack Harewood, "A Comparison of Labour Force Data", ibid., p.2.

[41] Jack Harewood, "Employment in Trinidad", op. cit., p. 3.

[42] Ibid., p. 5.

[43] Equivalent to Ontario Grade 12.

incidence was progressively lower as one moved to groups with either less or more formal education. For example, unemployment was only 3 per cent among those with no formal education.[44] In addition, wage rates in the economy as a whole are found to be outstripping both labour productivity and the price level. Between 1951 and 1961, one finds that while wage rates increased by 119 per cent, as is shown in Table XXXII, productivity increased by only 72 per cent and prices increased by 37 per cent. Employment, too, has not moved with the same force as output as where the former increased by 25 per cent, the latter's increase was over 115 per cent. Notice, however, that unit labour costs have been substantially reduced in both sugar and petroleum industries, while unit non-labour costs have increased. This is an indication that these industries, by adopting more capital--intensive techniques, have found a solution to the problem of reducing unit cost.[45]

Surplus labour has, therefore, resulted from the developments in the export sector, subsistence agriculture and the failure of the modern sector to absorb the increasing numbers of school leavers. We know that certain types of unproductive employment have been disappearing. Yet the capitalist sector has been unable to absorb

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[44]Draft Third Five Year Plan, op. cit., p. 177. The problem of educated unemployed and high school leavers is becoming acute in many less developed countries. For a good account of an African case, see A. Callaway, Unemployment Among African School Leavers, Journal of Modern African Studies, Vol. 1, 1963, No. 3, pp. 351-357.

[45]Lloyd Best, "Economy of the Commonwealth Caribbean", op. cit., p. 7.

TABLE XXXII

INDEX CHANGES IN SELECTED SECTORS, 1951-1961 (1951 = 100)

Sector	Output	Labour Input	Labour Productivity	Wage Rates	Unit Labour Costs	Price	Unit Non-Labour Costs
Agriculture	134.7	98.8	136.3	180.0	132.0	137.6	139.4
Sugar	174.6	62.5	279.4	199.3	60.4	136.9	111.6
Petroleum	244.5	91.5	267.3	209.6	78.4	124.9	135.1
Manufacturing	233.5	165.9	140.7	194.2	137.9	122.9	120.5
Construction	414.7	329.1	126.0	179.9	142.7	134.9	131.0
Government and Public Utilities	197.1	179.9	104.9	176.4	165.9	156.3	103.0
Other Services and Distribution	240.5	117.1	205.4	237.2	115.4	146.9	155.3
Combined Services	215.6	125.1	172.3	219.1	127.2	137.0	145.3

Source: Havelock Brewster, op. cit., p. 61.

the surplus labour sufficiently. Economic growth has, therefore, been accompanied by "structural unemployment", which the planners have described as arising from an excess supply of labour in relation to the amount of capital available; the type of technology used in production; the availability of the right kind of skills; the preferences of the labour force for, and the attractiveness to it of, different types of jobs; and the capacity to produce locally, instead of importing, a wide range of goods and services.[47]

Savings, Capital Accumulation and Income

Economic growth is said to be associated with an increase in capital per head of population.[48] The experience of the economy between 1951 and 1968 has been calculated from Table XXXIII with the aid of published yearly estimates of population. For capital formation as a whole, we found that the per capita figure grew from $109 in 1951 to $304 in 1968, an annual growth rate of about 10.5 per cent. By deducting capital formation in oil, we found that the per capita figure for the economy grew from $61.25 in 1951 to $113.50 in 1965, yielding a comparatively low growth rate of only 5.6 per cent. The difference is of course due to the high proportion of oil in total capital formation; in every year for which we have data, its share has exceeded 1/3. Even if we use the data without capital formation in the oil

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[47]Draft Plan, op. cit., p. 6.

[48]W. Arthur Lewis, The Theory of Economic Growth, op. cit., p. 201.

TABLE XXXIII

NATIONAL INCOME SERIES FOR TRINIDAD AND TOBAGO 1951-1968 (current p

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Private Consumption Expenditure	205.0	230.6	243.3	268.7	328.9	354.3	402.6	443.7	496.4	555.1	588.2
Government Consumption Expenditure	35.2	44.7	49.9	56.4	60.6	67.7	66.1	77.7	81.6	87.8	109.5
G.D.F.C.F.	69.8	74.8	78.8	84.4	108.8	120.8	161.3	195.6	242.6	268.3	258.8
Of which capital formation in oil	30.6	30.1	32.2	35.2	40.6	48.9	66.7	71.7	102.6	101.7	85.8
Exports of goods and services	218.6	257.7	286.1	292.7	318.9	570.6	445.0	482.0	506.5	551.7	697.7
Imports of goods and services	214.5	263.2	257.2	273.5	318.3	328.2	391.0	446.1	487.6	562.2	648.9
National income	260.6	292.3	314.7	345.3	397.5	433.8	501.9	566.9	609.1	683.7	742.0
G.D.P. at factor cost	312.1	343.4	386.3	410.5	476.1	556.3	659.1	719.4	799.1	865.9	954.8
Net Indirect Taxes	29.6	31.1	31.1	34.4	34.8	39.1	41.4	50.1	53.7	59.3	57.7
Provision for Consumption of fixed capital	24.1	29.3	38.5	37.3	43.8	53.8	48.6	63.3	72.4	93.1	99.5
Per Capital National Income	407	447	468	497	555	584	656	719	745	826	856
Net factor income payments to rest of world	27.4	21.8	33.1	27.9	34.8	68.7	108.6	89.2	117.6	89.0	114.3
G.N.P. at current prices	304.3	342.5	374.9	408.1	470.8	521.2	586.6	674.3	728.6	829.2	888.5

Sources: C.S.O., National Income of Trinidad and Tobago 1951-1961 (Port-of-Spain, 1962).
_____, National Income of Trinidad and Tobago 1952-1962 (Port-of-Spain, 1964).
_____, Annual Statistical Digests 1967, 1968.
Gov't of Trinidad & Tobago, Draft Third Five Year Plan 1969-1973 (Port-of-Spain,
U.N. Monthly Bulletin of Statistics, January, 1970 (New York, 1970).

Notes: (i) G.D.F.C.F.--Gross Domestic Fixed Capital Formation.
(ii) Per Capita National Income expressed in dollars. For the years 1951-1962 and it was computed from mid-year estimates of population published in sundry Annu Digests.

TABLE XXXIII

OR TRINIDAD AND TOBAGO 1951-1968 (current prices in $ TT mill.)

1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
328.9	354.3	402.6	443.7	496.4	555.1	588.2	622.2	716.1	774.2	842.3	912.0	950.4	1032.0
60.6	67.7	66.1	77.7	81.6	87.8	109.5	122.7	134.6	145.0	153.4	171.4	183.8	199.0
108.8	120.8	161.3	195.6	242.6	268.3	258.8	295.4	275.8	274.3	325.6	292.6	297.2	304.0
40.6	48.9	66.7	71.7	102.6	101.7	85.8	107.3	96.7	92.6	115.1	N.A.	N.A.	N.A.
318.9	370.6	445.0	482.0	506.5	551.7	697.7	699.2	746.1	814.5	815.1	867.0	892.0	930.1
318.3	328.2	391.0	446.1	487.6	562.2	648.9	680.6	705.8	792.1	875.5	845.9	812.3	838.1
397.5	453.8	501.9	566.9	609.1	683.7	742.0	779.4	855.0	895.8	922.2	1062.5	1138.0	N.A.
476.1	556.3	659.1	719.4	799.1	865.9	954.8	1005.7	1094.2	1148.6	1188.0	1326.5	1422.6	1533.3
34.8	39.1	41.4	50.1	53.7	59.3	57.7	66.2	79.2	86.7	91.7	89.7	95.1	N.A.
43.8	53.8	48.6	63.3	72.4	93.1	99.5	112.7	128.5	136.6	169.4	163.7	N.A.	N.A.
555	584	656	719	745	826	856	873	782	942	947	1068	1127	1230
34.8	68.7	108.6	89.2	117.6	89.0	114.3	115.6	110.7	116.2	96.4	100.3	N.A.	N.A.
470.8	521.2	586.6	674.3	728.6	829.2	888.5	948.1	988.4	1027.8	1154.2	1249.6	1341.0	N.A.

id Tobago 1951-1961 (Port-of-Spain, 1962).
id Tobago 1952-1962 (Port-of-Spain, 1964).
57, 1968.
rd Five Year Plan 1969-1973 (Port-of-Spain, 1968).
January, 1970 (New York, 1970).

apital Formation.
ed in dollars. For the years 1951-1962 and 1967-1968,
mates of population published in sundry Annual Statistical

industry, it is still satisfactory.[49] The problem here, though, is that much of this other capital formation has not been able to absorb much labour into the modern sector. In other words, the process of growth has been sparked and undoubtedly part of the increase in income has been earmarked for capital formation. But the economy remains backward because it is unable to set the process of development in motion by its own means. Indeed, the stimulus has always come from sources outside the community.

On the savings side, we saw that the propensity to save out of G.N.P. was quite small. It has also been shown that the supply of savings has been reduced by import activities in the external sector. Seers and Demas have pointed out the need to modify consumer attitudes which ape American consumption patterns.[50] It may be that this is a sequel to increasing economic growth, certainly among middle and higher income groups. But in the more aggregative framework of the economy as a whole, necessary imports appear to be the bête-noire. Indeed, the alteration of consumer preferences is a pressing need, but it is a cause that has rallied little political support.

Income growth has been one of the positive effects of the past economic expansion. National income has grown from $260.6 million in 1951 to $1,152.0 million in 1967, which represents an annual rate

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[49] We recognize here, as Emery did, op. cit., p. 494, that some of this "other" investment has been influenced by the petroleum industry's success; petrochemicals for instance. See Armstrong, op. cit., p. 23. It can, however, give an indication of the economy minus the enclave.

[50] Dudley Seers, "A Step Towards a Political Economy of Development: Trinidad and Tobago", op. cit., pp. 345-347 and Demas, op. cit., pp. 114-115.

of increase of 21.64 per cent in current prices. Current per capita income has increased from $407 in 1951 to $1,230 which gives an annual rate of increase of nearly 15 per cent. But even here there are signs of great decline comparable with those demonstrated in Table XXV.

TABLE XXXIV

ANNUAL RATES OF GROWTH OF CURRENT PER CAPITA NATIONAL INCOME (percentages)

1951-1955	1955-1961	1961-1967	1951-1967
9.03	9.03	5.27	11.09

Source: Table XXXIII.

Since 1961 the slowing down of income growth in the export sector has been communicated with equal force to most national income variables with the notable exception of consumption (see Table XXV). Again, the distribution of income gives an indication of the welfare effects of income growth. The study mentioned earlier by Ahiram,[51] which covered up to the late 1950's, showed that income distribution in Trinidad and Tobago was relatively equal and comparable with some Western European countries. In Table XXXV we have presented the distribution of income of persons assessed for income tax from 1946-1967. This data is of course, subject to certain limitations; for instance, it accounts for a small percentage of the labour force (about 15 per cent in 1967) and as such, has to be viewed as a sample.

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[51] E. Ahiram, "Distribution of Income in Trinidad and Tobago and Comparison with Distribution of Income in Jamaica", op. cit., p.106.

TABLE XXXV

THE DISTRIBUTION OF INCOMES OF PERSONS ASSESSED FOR INCOME TAX 1

Year	Total	Incomes[1]								
		Not Exceeding $1,000	$1,001 to $2,000	$2,001 to $3,000	$3,001 to $4,000	$4,001 to $5,000	$5,001 to $6,000	$6,001 to $10,000	$10,001 to $14,000	$14,001 to $18,000
1946	6,533	3,369	1,303	704	392	210	126	212	89	43
1947	6,319	3,150	1,308	678	412	197	134	211	95	42
1948	7,247	3,655	1,490	793	438	259	115	254	85	41
1949	7,907	4,057	1,522	847	516	277	136	275	116	53
1950	8,493	4,381	1,613	912	546	309	176	291	116	48
1951	9,525	4,938	1,802	992	586	367	220	325	109	66
1952	10,287	5,298	1,856	1,055	730	433	248	371	123	60
1953	11,727	6,109	2,041	1,131	807	505	317	472	137	80
1954	11,985	5,875	2,194	1,190	871	578	364	530	154	88
1955	13,239	6,397	2,595	1,280	949	607	397	610	168	103
1956	14,057	6,600	2,810	1,442	947	697	438	665	200	106
1957	16,180	7,916	3,078	1,548	1,088	759	520	772	240	99
1958	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1959	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1960	16,058	7,780	3,215	1,437	931	649	548	943	280	118
1961	16,474	7,901	3,317	1,453	993	693	570	881	363	116
1962	17,420	7,762	3,615	1,753	1,084	785	573	1,194	355	143
1963	16,502	7,809	3,472	1,602	894	667	508	1,008	328	109
1964	41,286	19,936	10,212	4,330	2,168	1,159	881	1,754	523	196
1965	47,834	22,243	12,371	5,558	2,573	1,433	973	1,760	563	189
1966	43,761	21,026	11,386	4,933	2,263	1,253	732	1,364	490	166
1967	54,037	21,818	14,017	7,589	3,484	2,045	1,293	2,307	874	316

Source and Notes: C.S.O., Annual Statistical Digest 1964 (Port-of-Spain, 1966), p. 163
_____, Annual Statistical Digest 1968 (Port-of-Spain, 1970), p. 124

[1]The net chargeable income of persons assessed for income tax, i.e. allowances have been made, e.g. personal allowance, wife allowance,

TABLE XXXV

OF INCOMES OF PERSONS ASSESSED FOR INCOME TAX 1946-1967 (TT $)

	INCOMES[1]									
01 to 00	$4,001 to $5,000	$5,001 to $6,000	$6,001 to $10,000	$10,001 to $14,000	$14,001 to $18,000	$18,001 to $22,000	$22,001 to $28,000	$28,001 to $60,000	$60,001 to $66,000	$66,001 and over
92	210	126	212	89	43	22	28	30	1	4
12	197	134	211	95	42	25	28	35	2	2
38	259	115	254	85	41	35	29	39	1	3
16	277	136	275	116	53	35	29	37	-	7
46	309	176	291	116	48	30	30	33	2	6
86	367	220	325	109	66	39	43	31	-	7
30	433	248	371	123	60	31	34	41	2	5
07	505	317	472	137	80	34	39	47	2	6
71	578	364	530	154	88	39	36	55	2	9
49	607	397	610	168	103	48	33	50	3	9
47	697	438	665	200	106	32	32	57	-	11
88	759	520	772	240	99	55	28	65	-	12
A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
31	649	548	943	280	118	60	37	51	5	4
93	693	570	881	363	116	67	63	45	2	10
84	785	573	1,194	355	143	57	41	51	1	6
94	667	508	1,008	328	109	44	34	25	2	-
68	1,159	881	1,754	525	196	53	45	27	1	1
73	1,433	973	1,760	563	189	79	49	41	-	2
63	1,253	732	1,364	490	166	71	43	33	-	1
84	2,045	1,293	2,307	874	316	137	79	73	-	5

stical Digest 1964 (Port-of-Spain, 1966), p. 163.
stical Digest 1968 (Port-of-Spain, 1970), p. 124.

income of persons assessed for income tax, i.e. the residual after all deductions for
n made, e.g. personal allowance, wife allowance, life insurance premiums, etc.

It also does not account for "own-account" workers such as farmers and some workers in services industries like taxi-drivers, and hawkers. Viewing it as a sample, nevertheless, we have attempted to observe trends in the percentage of persons in different income groups in Table XXXVI.

TABLE XXXVI

THE DISTRIBUTION OF INCOMES OF PERSONS ASSESSED FOR INCOME TAX: By Percentages and Income Groups 1946-1967

Year	Less Than $1,000	$1,000 to $3,000	$3,000 to $5,000	Over $5,000
1946	51.5	30.7	9.2	8.4
1947	49.8	31.4	9.6	9.0
1948	50.4	31.5	9.6	8.3
1949	51.3	29.9	10.0	8.7
1950	51.5	29.7	10.0	8.6
1951	51.8	29.3	10.0	8.8
1952	51.5	28.2	11.5	8.8
1953	52.0	27.0	11.1	9.6
1954	49.0	28.2	12.0	10.6
1955	48.3	29.2	11.7	10.7
1956	46.9	30.2	11.6	10.9
1957	48.9	28.5	11.4	11.0
1958	N.A.	N.A.	N.A.	N.A.
1959	N.A.	N.A.	N.A.	N.A.
1960	48.4	28.9	9.8	12.7
1961	47.9	28.9	10.2	12.8
1962	44.5	30.8	10.7	13.8
1963	47.3	30.7	9.4	12.4
1964	48.2	35.2	8.0	8.4
1965	46.5	37.4	8.3	7.6
1966	48.0	37.2	8.0	6.6
1967	40.3	39.9	10.2	9.4

Source: Table XXXV.

There has been a gradual decline in the percentage of persons in the lower income groups of $1,000 and less from 51.5 per cent in 1946 to 40.3 per cent in 1967. On the other hand, there has been increases

in all of the higher income groups. Subject to the qualifications made above, we can conclude that in general, income growth has been associated with a more favourable spread of its distribution. Notice, however, that in the higher income group of $5,000 and over the percentage declined from 12.8 in 1961 to 9.4 in 1967, in unison with the trend established in Table XXV for that period. Thus indicating that the percentage in higher income brackets varies with the trends in export income, national income and output.

Output and Structural Changes

In Table XXXVII data for the gross domestic product at factor cost by sector for 1951-1968 is given. The same information is expressed in percentages in Table XXXVIII. Considering the period as a whole, output more than quadrupled in current prices with the result that it achieved an overall annual growth rate of 23.02 per cent. It should be mentioned here that price movements have not affected these data seriously, since the economy has experienced moderate price movements. Between 1960 and 1968 prices increased at an average annual rate of 2 per cent.[52]

Among the sectors, public utilities and general government led with annual growth rates of 41.28 per cent and 38.74 per cent respectively. This is not surprising since during the period, government output was augmented by that of the first and second five year plans which we will discuss later. The plans provided a good deal of relief employment and added to the stock of overhead capital. Other manufacturing and banking also performed almost as well with annual growth rates of 38.59 per cent and 38.00 per cent. The former gives an indication of the extent to

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[52] Third Five Year Plan, op. cit., p. 422.

TABLE XXXVII

GROSS DOMESTIC PRODUCT AT FACTOR COST BY SECTOR 1951-1

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Agriculture, forestry, fishing & quarrying	55.6	61.0	69.3	76.9	83.6	84.1	95.6	98.5	99.0	103.4	112.5	108.3
Petroleum	93.5	98.3	121.2	120.1	138.9	187.1	237.1	233.3	261.4	263.4	286.3	291.5
Sugar Manufacturing	7.7	8.9	11.2	12.4	13.5	11.0	13.2	13.4	14.1	16.8	18.2	15.5
Other Manufacturing	35.7	37.9	39.6	42.2	45.9	50.2	64.7	77.9	89.0	91.4	101.3	116.6
Construction	8.4	9.3	8.1	10.1	14.1	17.0	20.7	32.3	36.3	40.6	49.7	55.3
Transport and Distribution	38.7	44.2	45.3	48.3	69.9	89.4	104.2	119.3	135.2	149.6	162.1	173.7
Public Utilities	11.1	12.4	13.1	13.5	14.9	16.2	18.7	19.6	21.3	23.4	36.6	41.5
General Government	29.0	36.2	40.7	47.9	48.6	51.2	52.6	63.4	70.8	82.5	93.1	100.5
Ownership of Dwellings	8.3	9.0	9.6	10.4	10.8	11.0	11.0	11.5	13.4	16.8	19.6	21.6
Banking and Finance	6.3	7.1	7.3	7.2	9.6	10.7	12.2	11.5	13.4	20.0	19.8	21.0
Other Services	17.8	19.1	20.9	21.5	27.3	28.4	31.1	35.1	44.5	48.0	55.0	60.2
G.D.P. at factor cost	312.1	345.4	386.5	410.5	476.1	556.3	659.1	719.4	799.1	865.9	954.8	1005.7

Source: See Table XXXIII.

* 1951-1962.

TABLE XXXVII

IC PRODUCT AT FACTOR COST BY SECTOR 1951-1968 ($M. TT)

1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	Ave. Annual Rate of Growth
84.1	93.6	93.5	99.0	108.4	112.5	108.3	115.7	111.8	105.5	107.3	111.6	127.0	7.55
187.1	237.1	233.3	261.4	263.4	286.3	291.5	296.9	301.0	284.1	313.6	350.4	379.0	17.96
11.0	13.2	13.4	14.1	16.8	18.2	15.5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	9.21*
50.2	64.7	77.9	89.0	91.4	101.3	116.6	141.7	161.8	179.2	198.4	218.6	269.9	38.59
17.0	20.7	32.3	36.3	40.6	49.7	55.3	64.4	57.3	58.6	56.2	53.2	58.1	34.80
89.4	104.2	119.3	133.2	149.6	162.1	173.7	175.9	193.0	211.7	235.2	240.8	273.0	35.62
16.2	18.7	19.6	21.3	28.4	36.6	41.5	43.3	53.5	64.9	73.0	72.5	89.0	41.28
51.2	52.6	63.4	70.8	82.5	93.1	100.5	104.3	115.2	118.6	132.4	149.6	162.0	38.74
11.0	11.0	11.5	13.4	16.8	19.6	21.6	42.3	44.3	47.3	49.9	53.7	54.5	32.03
10.7	12.2	11.5	13.4	20.0	19.8	21.0	34.7	37.6	39.4	46.2	47.3	47.0	38.00
28.4	31.1	35.1	44.5	48.0	55.0	60.2	56.4	58.5	66.6	72.7	80.2	83.7	21.78
556.3	659.1	719.4	799.1	865.9	954.8	1005.7	1094.2	1148.6	1188.0	1326.5	1422.6	1533.3	23.02

which there was production for the domestic market, since its exports were negligible, yet its output was almost 75 per cent of that of the petroleum sector. But unless the size of the market can be increased by increased exports[53] or regional integration, there would be a limit to its growth potential. The high growth rate in banking and finance is recent, particularly, since 1962 when the country became independent and when an influx of foreign institutions was initiated. Construction increased rapidly from 1951 and reached its peak in 1963 when its output was $64.4 million. Since then it has declined somewhat. The most striking feature of the output picture over this period is the comparatively subdued growth of the traditional export sectors of petroleum, sugar, and agriculture. This accounts for the general decline in the rate of total output and partly explains the increasing importance of the government sector. It would seem that the export sector would have to perform better if total output is to regain its pre-1962 growth rate or the onus will be placed on the rest of the economy. To date the rest of the economy has performed well, which would lead us to conclude that production for the domestic market has not been impaired by economic growth in the export sector. However, we have seen that it is with the export sector that the strongest stimulus for economic growth lies.

Table XXXVIII illustrates the structural transformation that has taken place during the period. The share of agriculture has

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[53]Alister McIntyre, op. cit., pp. 136-137, where the problems of industrial expansion of Jamaican textile exports is demonstrated. Also for a more generalized approach, see Albert O. Hirshman, "Effect of Industrialization on the Markets of Industrial Countries" in Bert F. Hoselitz ed., The Progress of Underdeveloped Areas, University of Chicago Press (Chicago, 1952), pp. 270-283.

TABLE XXXVIII

INDUSTRIAL ORIGIN OF GROSS DOMESTIC PRODUCT AT FACTOR COST 1951-19

Sectors	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	196
ALL SECTORS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.
Agriculture	17.3	15.8	16.5	16.5	16.5	15.7	14.8	13.8	12.4	12.7	12.1	10.
Oil and Asphalt	28.9	28.2	28.1	27.2	27.4	29.5	30.3	30.6	31.4	30.7	32.0	29.
Sugar	2.6	2.3	2.5	2.7	2.6	2.0	1.9	1.9	1.7	2.0	2.0	1.
Other Manufactures	10.1	10.0	9.8	10.1	9.5	9.9	10.4	10.6	10.7	10.7	10.6	10.
Construction	2.6	2.6	2.2	2.5	2.9	3.3	3.4	4.7	4.7	4.7	4.9	5.
General Government (including public utilities)	14.3	15.1	15.2	15.2	13.7	13.3	12.2	11.9	11.8	12.2	12.1	14.
All Other	24.2	26.1	25.7	25.7	27.4	26.2	27.0	26.5	27.2	27.0	26.3	29.

Source: see Table XXXIII.

TABLE XXXVIII

OF GROSS DOMESTIC PRODUCT AT FACTOR COST 1951-1968 (percentages)

54	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
.5	16.5	15.7	14.8	13.8	12.4	12.7	12.1	10.3	10.7	9.0	8.9	8.7	8.7	8.2
.2	27.4	29.5	30.3	30.6	31.4	30.7	32.0	29.0	27.6	26.8	24.1	24.4	25.4	24.6
.7	2.6	2.0	1.9	1.9	1.7	2.0	2.0	1.6	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
.1	9.5	9.9	10.4	10.6	10.7	10.7	10.6	10.5	13.1	14.3	14.4	15.4	14.6	17.5
.5	2.9	3.3	3.4	4.7	4.7	4.7	4.9	5.5	5.1	5.0	5.0	4.4	3.9	3.1
.2	13.7	13.3	12.2	11.9	11.8	12.2	12.1	14.1	13.8	14.9	15.6	16.0	16.2	16.3
.7	27.4	26.2	27.0	26.5	27.2	27.0	26.3	29.0	28.6	29.5	31.1	31.4	30.6	29.6

slipped to less than half what it was in 1951. Petroleum and sugar are also observed to be declining. Indeed, the entire export sector's share has declined since 1951. On the other hand, manufacturing and the government sector have improved their share. This implies that the economy is becoming more diversified, as diversification is taking place around the export base. But the resources, marketing facilities and access to funds of the foreign-owned export sector permits it to overshadow the rest of the economy by its sheer size. If we examine the average product by sectors this sharp difference becomes clear.

In Table XXXIX we can see that the value of output per man was 16 times higher in the petroleum sector than in the agricultural sector, or 6 times output per man in the economy as a whole.[53]

TABLE XXXIX

GROSS DOMESTIC PRODUCT AT FACTOR COST PER PERSON EMPLOYED 1968

Sectors	G.D.P. at Factor Cost Per Person Employed 1968
Petroleum	$23,563
Manufacturing	5,095
Transport and Distribution	5,084
Public Sector	4,198
Other Services	3,630
Construction	1,955
Agriculture	1,751
Whole Economy	4,380

Source: Gov't of Trinidad and Tobago, Draft Third Five Year Plan, op. cit., p. 46.

[53] Draft Plan, op. cit., p. 46.

In comparison, manufacturing and the public sector's output per man is less than 6 times that of the petroleum sector. This is also proof of Emery's argument that efficiency and productivity tends to be greater in the export sector,[54] as evidence by the performance of the petroleum industry.

In general export growth has been associated with growth of the domestic product and production for the domestic market. There has also been some diversification in the economy, notably an increasing role of manufacturing. But the country is still overwhelmingly dependent on its exports.

Balance of Payments

The collection, preparation and presentation of balances of payments data has not been as efficient as that of other aspects of the economy. In a study for the years 1951-59, F.B. Rampersad conceded that the published data was derived in rough and ready form and should not have been published at all. As a result his conclusions had to be drawn from inference.[55] At the terminal point of our study, 1968, there are still many major problems in the collection and presentation of these statistics.[56] In addition, the county has had a dependent currency up until 1964 and it has been claimed that in

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[54]Emery, op. cit., p. 433.

[55]See F.B. Rampersad, "Some Aspects of External Trade and Payments of Trinidad and Tobago 1951-1959", Social and Economic Studies, Vol. 12, No. 2, U.W.I. 1963, p. 101.

[56]See Harold Harnarine, "Problems of Measuring Balance of Payments Transactions in the Area", C.S.O. Research Papers, No. 5, April, 1968 (Trinidad, 1968), pp. 30-51.

such a situation balance of payments problems are absent.[57] The reasoning behind this stems from the operations of the Eastern Caribbean Currency Board and its counterparts in Colonial Africa.[58] The purpose of the board was to issue and maintain the value of the local currency. To this end, the territory was obliged to provide 100 per cent sterling assets as backing for its currency. In effect, this represented an extension of the United Kingdom's monetary system and the question of balance of payments difficulties never arose as sterling could be readily acquired with local currency, and the proceeds used for purchasing other currencies. On balance, these economies have not had any serious balance of payments problems and some of the reasons advanced were: firstly, the foreign trade multiplier would work towards equilibrium in the balance of payments. A change in say exports leads to a multiple expansion in money national income. This expansion depends on the size of the leakages in the economy, i.e. the marginal propensities to import and save. Because, as we have seen, the marginal propensity to import is large and the marginal propensity to save is small, there is a great tendency for balance of payments equilibrium to be preserved. Thus, if there is positive savings and no autonomous shifts in the

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[57] Ida Greaves, Colonial Monetary Conditions (H.M.S.O. London, 1953), and A. Hazelwood, "Economics of Colonial Monetary Arrangements", Social and Economic Studies, Vol. 3, Nos. 3 and 4 (U.W.I., 1954) and cf. C.Y. Thomas, "The Balance of Payments in a Colonial Economy", Social and Economic Studies, Vol. 12, No. 1, p. 32.

[58] In 1951, the note circulation of the governments of Trinidad, Barbados and British Guiana, Leeward and Winward Islands was taken over by the Eastern British Caribbean Currency Board, and a common currency was issued. For a detailed account of the operations of this board, see Clive Y. Thomas, Monetary and Financial Institutions in a Dependent Monetary Economy: British Guiana 1945-1962, supp. to Vol. 14, No. 4, Social and Economic Studies, Dec. 1965 (U.W.I., 1965) pp. 13-36.

investment or government expenditure schedules, the foreign trade multiplier of itself will not be sufficient. In addition, as external assets and hence part of the base of money supply has to be earned, a deflationery influence is exerted on money national income. This follows since money supply cannot be independently increased by the government authorities to meet increases in domestic output.[59]

Since 1964, however, a central bank has been established, but it is not expected that it can overnight transform the monetary system from a dependent to an independent one.[60] Indeed, a study on Jamaica, the first territory in the area to establish a Central Bank, has shown that the operations of expatriate banks can militate against such transformation.[61] With these qualifications, Table XL gives the balance of payments transactions covering 1962-1968. From this table and data for 1951-1962,[62] it emerges that there has been a chronic deficit on current account from 1951 through 1968. We know the mineral sector's receipts for exports and imports are not noted for generating much foreign exchange, since settlements are effected through their overseas offices, with transfers of foreign exchange only being made to cover tax payments

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[59] See Clive Y. Thomas, "The Balance of Payments and Money Supplies of a Colonial Monetary Economy", Social and Economic Studies, Vol. 12, No. 1, March, 1963 (U.W.I., 1963), pp. 34-35 and see Table XXXII, cf. Col. (1) and Col. (6).

[60] Ibid., p. 36.

[61] See Lloyd Best and Alister McIntyre, "A First Appraisal of Monetary Management in Jamaica", Social and Economic Studies, Vol. 10, No. 3, Sept., 1961 (U.W.I., 1962), pp. 353-363.

[62] C.S.O., National Income of Trinidad and Tobago, op. cit., p. 141.

TABLE XL

BALANCE OF PAYMENTS 1962-1968 (mill. TT $)

	1962	1963	1964	1965	1966	1967	1968
CURRENT ACCOUNT							
(i) Goods and Services							
Exports f.o.b. (adjusted)	559.9	595.0	693.4	710.5	752.7	750.2	830.0
Imports c.i.f. (adjusted)	606.2	644.0	731.0	816.9	772.6	710.1	797.6
Balance on visible trade	-46.3	-49.0	-37.6	-106.4	-19.9	40.1	32.4
Services:							
Transportation	70.0	60.2	61.8	57.8	57.8	52.9	64.0
Foreign Travel	-3.7	0.2	0.3	0.2	3.2	-0.7	2.0
Investment Income	-118.5	-115.8	-121.4	-103.3	-107.6	-121.8	-131.6
Other	5.3	4.7	6.3	8.5	9.8	-8.9	-6.6
Balance on Service	-50.8	-53.4	-46.3	-36.8	-23.4	-78.5	-72.2
Balance on Goods and Services	-97.1	-102.4	-83.9	-143.2	-43.3	-39.4	-39.8
(ii) Transfer Payments	-3.9	-2.7	1.2	21.3	8.4	-1.6	-1.0
Private	-1.6	1.4	1.3	0.6	0.6	1.6	N.A.
Official	-2.3	-4.1	-0.1	20.7	7.8	-3.2	N.A.
CAPITAL ACCOUNT							
(iii) Capital inflows (net)	79.3	137.4	75.2	119.5	50.3	45.6	63.0
Private Sector (net)	67.3	95.3	52.3	102.0	37.6	42.9	45.0
Public Sector (net)	12.0	42.1	22.9	17.5	12.7	2.7	18.0
(iv) Net errors and omissions	3.7	5.4	-22.9	9.9	-1.7	-3.7	-2.2
(v) Surplus deficit	-14.1	40.4	-31.6	7.3	-9.7	1.9	20.0
FINANCING THE DEFICIT							
(vi) Net Foreign Reserve Movement (- increase)	14.1	-40.4	31.6	-7.3	9.7	-1.9	-20.0

Source: Gov't of Trinidad & Tobago, Draft Third Five Year Plan 1969-1973, op. cit. p. 36.

and expenditure on local inputs.[63] This trend has continued into 1968. But the favourable balance on visible trade account in 1967 and 1968 were reportedly due to the upsurge in domestic crude oil production (see Table IV) which has reduced the necessity to import crude oil; to rapid growth of exports of petrochemicals (see Table XIII, rows (4), (5)); and to import substitution in food and manufactures. The previous deficit on current account was largely financed by capital inflows in both the private and public sectors, principally in the former, where much of the investment has taken the form of re-invested profits. But this has shown a tendency to decline.[64] An overview of the effect of economic growth on balance of payments presents us with the picture of current account deficits and for some time deflationary pressures[65] associated with the operations of the monetary system.

Summary

We have seen substantial economic growth as measured by the G.N.P. and a remarkable reduction in the birth rate in the post-war period. Per capita national income has increased rapidly and income distribution has progressed equitably. However, the problem of unemployment has been aggravated seriously. We have also seen that the national savings ratio is still quite small and

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[63] F. Rampersad, "Some Aspects of Trade and Payments", op. cit., p. 117, and Alister McIntyre, "Some Aspects of Development and Trade", op. cit., p. 141.

[64] Draft Plan, op. cit., p. 37.

[65] In passing it is noteworthy that when the U.K. £ was devalued in 1967, the Trinidad and Tobago dollar was also devalued by the same 14.3 per cent, with the result that price level increases attributed solely to this was around 4 per cent. See Ibid., p. 38, and William Demas, "Consequences of Devaluation in Trinidad and Tobago", in Regional Conference on Devaluation, op. cit., p. 61.

relatively little capital formation exists outside the petroleum. Yet some progress has been in production for the domestic market, but not sufficient to alter the country's position as a highly dependent export economy. On the monetary side, the price level increases have been quite small in comparison with labour productivity, output and wage rates. Indeed, the monetary system can be viewed as in a state of transition from a dependent to an independent one.

After almost 20 years of very high growth, the country is still underdeveloped and is faced with the crisis of unemployed youths who have had a good deal of education. As Seers rightly observed:

> They expect office jobs of one kind or another and would not accept at all readily manual work, especially in the countryside, even assuming they were capable of it.[66]

All the prerequisites for serious social unrest are therefore present.

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[66]Dudley Seers, "A Political Economy of Development", op. cit., p. 235.

CHAPTER IV

DEVELOPMENT PLANNING AND THE CHOICE OF DEVELOPMENT STRATEGY

Development Planning

National approaches to development planning in Trinidad began with the first development plan for the period 1958-1962. Prior to this, there is some evidence of a plan initiated by the Colonial Development and Welfare Scheme for the period 1950-1956. In the latter, £10,000,000 or $48,000,000 was the allocated expenditure of which 37 per cent was raised locally, 54 per cent was derived from loans and the remaining 9 per cent was obtained from C.D. & W. grants.[1] No specific details are available but certain shortcomings were noted. The allocation of funds by the British government were found to be lacking a consistent principle of either economic return, alleviation of poverty, or improvement of social services. As well, the allocation by the receiving government between investment possibilities were found to be determined more by socio-political ideas and bargaining strength than economic criteria, often leading to "all-or-nothing" approaches to sector allocation. And there was no integration of the plan in order to allow for the repercussions and counter-repercussions in the many sectors following an expansion in one sector.[2] These criticisms

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[1] Douglas Dosser, "The Formulation of Development Plans in the British Colonies", Economic Journal, Vol. LXIX, June, 1959 (London, 1959), p. 257.

[2] Ibid., pp. 262-263.

were held to be generally applicable. All we may add in the way of support, is that Trinidad's experience indicated that colonial authorities placed greater emphasis on the improvement of health and social services, to the neglect of other economic criteria. This has led to the familiar situation in which population growth and, therefore, labour force growth outstrips that of economic opportunities, thus creating a pool of unemployed labour.

The First Five-Year Plan, 1958-1962

The first plan initiated after the country obtained internal self government, reflected a hybrid of Lewis' and Hirschman's thinking. Heavy emphasis was placed on what Hirschman describes as "social overhead capital", as more than half the capital provisions were so allocated. It was Hirschman's argument that S.O.C. is advocated not because of its direct effect on final output, but because it permits and, in fact, invites D.P.A. (directly productive activity) to come in.[3] If we recall Lewis' tax incentives, monopoly rights and subsidies to encourage industry,[4] the association is clear. The basic objectives of the plan were briefly described as more jobs, higher productivity of the workers and better amenities for the workers.[5] Its total capital provision amounted to $191,388,364, as

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[3]Albert Hirschman, The Strategy of Economic Development (Forge Village, 1963), p. 84.

[4]W. Arthur Lewis, "The Industrialization of the British West Indies", op. cit., p. 37. Actually Lewis together with Teodoro Moscoso designed this first plan. See Five Year Development Programme 1958-1962, p. 3.

[5]Gov't of Trinidad and Tobago, Five Year Development Programme 1958-1962, (Port-of-Spain, 1958), p. 3.

is shown in Table XLI.

TABLE XLI

PROPOSED AND ACTUAL EXPENDITURE BY SECTORS OF THE FIRST FIVE YEAR PLAN (mill. TT $)

Sectors	Proposed Expenditure 1958-1962	Actual Expenditure 1958-1962
Agriculture	7.7	4.5
Forests	0.1	0.1
Fisheries	1.7	0.2
Industry	6.0	3.5
Tourism	12.3	15.3
Roads and Bridges	32.0	23.9
Harbours and Ports	7.2	1.1
Coastal Steamers	3.6	3.4
Aviation	2.9	7.5
Electricity	26.1	38.7
Drainage and Reclamation	2.3	3.0
Public Buildings & Amenities	13.0	9.0
Education	12.7	13.3
Health	8.6	24.3
Water	21.8	27.8
Housing	12.2	23.4
Local Government	19.1	19.5
Labour and Social Services	2.0	2.3
TOTAL	191.4	218.5

Source: Five-Year Development Plan 1958-1962, op. cit., p. 5 and Draft Second Five-Year Plan 1964-1968 (Port-of-Spain, 1963), p. 34.

However, this amount was increased by over $27 million. The most striking feature was the low priority placed on agriculture, since its original provision was drastically reduced from $7.7 million to $4.5 million. It appears that greatly increased expenditures on electricity, health, housing and water affected resources available for agriculture. It was proposed that 65 per cent of the plan was to be financed out of ordinary surpluses, with a further 5 per cent

coming from local borrowing.[6] Indeed, more than 90 per cent of the funds were raised locally, which was highly commendable. This is borne out in Table XLII. The programme was further calculated to amount to about 8 per cent of G.N.P. in 1962 and to average 7 per cent over the five year period. This compared favourably with the U.K.'s 7 per cent, Ceylon's 7½ per cent and Ghana and New Zealand's over 8 per cent.[7]

TABLE XLII

FINANCING THE FIRST FIVE YEAR PLAN BY SOURCE OF FUNDS
(mill. TT $)

Item	Expenditure 1958-1962
Public Sector Savings (incl. gov't revenue surplus and savings of public utilities)	114.1
Use of Government Surplus Balances	21.1
Capital Revenues from Local Sources	8.1
Local Borrowing	56.5
Foreign Borrowing	15.7
Chaguaramas Agreement Funds	2.0
Foreign Aid (grants, soft loans)	3.0
TOTAL	218.5

Source: See Table XLI.

The year 1963 was an interim year in which projects not completed in the first plan could be completed.

The Second Five-Year Plan 1964-1968

The second plan saw a continuation of the same basic short-term goals as the first plan, which was briefly spelled out as "the freeing of the human and economic resources from their dependence on direction

[6] Ibid., p. 49.

[7] Ibid., p. 5.

from abroad and the initiation of (that) economic and social transformation which will enable the country to realize its full potential".[8] Some progress was made on account of expenditure in the first plan. Again the Hirschman-Lewis approach dominated the structure of the plan. It was the planners' argument that prudent investment of public funds in the improvement of such public facilities as education, electricity, transport and communications, health, water and drainage created a climate which facilitated and invited private capital investment. This approach was seen to have a dual purpose; a domestic social value, and the fact that the absence of such overhead capital would place a burden on the private investor which would be too great.[9]

The total capital provision amounted to $302,646,327, but was increased to $320,668,561 on account of severe hurricane damage to Tobago in 1963.[10] However, actual expenditure of $305.6 million fell much below this target as is shown in Table XLIII. It is noted that agriculture received greater allocations yet the emphasis on infrastructure was continued as exemplified by larger expenditures on transport and communications, and drainage. Notable too is the addition to the financial infrastructure in the form of a Central Bank, and a large increase in expenditure on water and sewerage. The

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[8]Gov't of Trinidad and Tobago, Draft Second Five-Year Plan 1964-1968 (Port-of-Spain, 1963), p. 3.

[9]Ibid., pp. 3-4.

[10]Gov't of Trinidad and Tobago, Second Five-Year Plan 1964-1968 Modifications to Draft Plan (Port-of-Spain, 1965), pp. III, 1.

latter was as a result of the completion of a nation wide sewerage scheme which started in the terminal year of the first plan.

TABLE XLIII

PLANNED AND ACTUAL EXPENDITURE BY SECTORS OF THE SECOND FIVE YEAR PLAN (mill. TT $)

Item	Planned Expenditure 1964-1968	Actual Expenditure 1964-1968
Agriculture, forests and fisheries	60.9	49.5
Industry and Tourism	11.9	8.1
Transport and Communications	57.8	63.6
of which roads & bridges	26.0	25.8
harbours & ports	10.0	1.9
aviation	0.8	8.0
bus transport	N.A.	9.9
telephone service	21.0	18.0
Electricity	68.1	62.9
Drainage & Reclamation	5.1	5.1
Public Buildings	7.5	7.4
Education and Training	19.8	23.6
Health	2.2	2.4
Water and Sewerage	30.0	39.5
Housing	39.4	19.8
Local Government	8.3	5.7
Special Works Programme	5.0	10.1
Social & Community Development	0.9	3.9
Urban and Rural Development	3.6	0.6
Central Bank	N.A.	2.4
Other	--	1.0
TOTAL	320.6	305.6

Sources: Draft Third Five-Year Plan, op. cit., p. 64 and Draft Second Five Year Plan Amended, op. cit., p. xi.

A major change occurred in the financing of the plan, as is shown in Table XLIV. A greater dependence was placed on foreign sources of finance, as only 31 per cent of the funds could be raised locally. The reasons behind this change stemmed from the fact that the unspent balances from years preceding the first plan, which were

TABLE XLIV

FINANCING THE SECOND FIVE-YEAR PLAN BY SOURCE OF FUNDS
(mill. TT $)

Item	Expenditure 1964-1968
Public Sector Savings (incl. gov't revenue surplus and savings of public utilities)	45.4
Use of Government Surplus Balances	----
Capital Revenue from Local Sources	4.0
Local Borrowing	65.5
Foreign Commercial Loans	53.0
Funds Provided under Chaguaramas Agreement	51.5
Foreign Aid (grants and soft loans)	101.1
TOTAL	320.5

Source: Modifications to Draft Second-Plan, op. cit., p. ix.

turned into social capital with little direct return meant that a major source of investment funds was no longer available during the second plan. In addition, (Table XXV) the failure of revenue to grow faster than Gross Domestic Product reflected the failure of tax revenue and, therefore, total revenue to provide the required surpluses, since current expenditures exceeded it with growth of the Domestic Product. This has been accounted for by the large concessions and tax holidays referred to previously and the increase in wages and salaries incurred with growth of the Domestic Product in the public sector.[11]

[11] Draft Second Plan, op. cit., pp. 94-95. See Table A in appendix for the balance of revenue over current expenditures. Independence and economic growth required new government ministries such as External Affairs, Defence and the streamlining of the Development Corporation with their attendant costs.

The Third Five-Year Plan 1969-1973

The third plan attempts to address itself to the central tasks of restructuring the economy, which are stated as:

1) Diversification of the country's structure of production

2) The achievement of full employment; and

3) making the economy more self-reliant.[12]

Diversification is to be achieved by a rapid expansion of exports of manufactures to the Caribbean Free Trade Area market, increases in food and livestock production largely pigs and poultry, expansion of the tourist industry, an expansion of earnings from traditional export agriculture through intensive techniques and an attempt to reduce the taste for inessential imported goods in favour of locally produced goods. Unemployment, on the other hand, is not expected to be drastically reduced in this plan period. A full solution to this problem is envisaged between 1983 and 1985. This is so for two main reasons: firstly, it is not expected that during this time the manufacturing sector will grow sufficiently to provide a sufficient number of jobs. In the second place, the necessary demographic changes consequent to the Government's Family Planning Programme are not expected to work themselves out until the late 1970's. It will not, therefore, be until the late 1970's that an appreciable decline in the rate of increase of the labour force may be experienced. The planners recognized that:

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[12]Gov't of Trinidad and Tobago, Third Five-Year Plan, 1969-1973 Approved (Port-of-Spain, 1969), p. 31.

> There could be no quick solution of the unemployment problem because of the high capital-intensity of modern methods of production--not only in industry and petroleum, but also in agriculture and tourism.[13]

Two other factors were taken into consideration, namely, possibilities for emigration and the question of wage restraint.[14] In other words, a gradual reduction of the labour force and an increase in manufacturing activity, together with increasing productivity in the export sector, is envisaged to create a fluid job market capable of absorbing the then reduced labour force growth.

Self reliance is approached by attempting to build up local sources of savings; local mechanisms for mobilizing both risk and loan capital; local entrepreneurship; local management; local technology; local designs and styles; and greater use of indigenous local resources.[15] The proposed capital expenditures are shown in Table XLV and their financing in Table XLVI. The proposed expenditures are $75 million more than the second plan, and $162 million more than the first plan. Again more than half of all expenditures is devoted to infrastructure and notable increases are planned for industry and tourism, petroleum, and agriculture in an attempt to achieve self-reliance. It is mentionable that this plan does not view the problem of development from a regional angle, as presented by Brewster and Thomas. It only mentions, and then only in passing, an expanded market for its manufactures through CARIFTA. This is particularly disappointing since any initiatives for effective regional integration would have to come from Trinidad, Jamaica, or Guyana, the more successful territories in the region.

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[13] Ibid., p. 34. [14] Ibid., pp. 34-35. [15] Ibid., p. 35.

TABLE XLV

PLANNED EXPENDITURE ON THIRD FIVE-YEAR PLAN (mill. TT $)

Item	Planned Expenditure 1969-1973
Agriculture, forests and fisheries	61.5
Industry and Tourism	22.5
Petroleum	10.0
Transport and Communications	80.6
of which roads and bridges	42.0
harbours and ports	7.5
aviation	30.0
bus transport	1.1
Electricity	40.0
Drainage and Reclamation	6.0
Education and Training	43.0
Health and Family Planning	6.4
Water and Sewerage	33.0
Housing	31.5
Community Development	20.5
Co-operatives	0.5
Social Welfare	1.0
Culture	1.0
Mass Media and Information Services	1.5
Local Government	7.0
Public Buildings	14.0
TOTAL	380.0

Source: Third Five-Year Plan Approved, op. cit., p. 69.

TABLE XLVI

FINANCING THE THIRD FIVE-YEAR PLAN BY SOURCE OF FUNDS (mill. TT$)

Item	Expenditure 1969-1973
(1) Public Sector Savings	125.0
(2) Capital Receipts & Other Internal Borrowing	88.0
(3) Internal Financing (1+2 + uncovered gap of $26.5 mill.)	239.5
(4) External Financing (foreign loans and grants)	140.5
TOTAL	380.0

Source: Approved Third Plan, op. cit., p. 78.

The financing pattern is similar to that of the second plan with 63 per cent originating in the domestic economy and the remaining 37 per cent coming from external sources. It is noted that because of the country's high per capita income, international financial agencies expect her to provide 60 per cent - 70 per cent of the financing for development.[16] As a general comment, we can say that the plans have been designed to increase the stock of Social Overhead Capital and more recently to attempt at diversifying the economy. The increased supply of S.O.C. plus the liberal incentives have aided in attracting capital, but perhaps, not the right type of capital, since labour-saving industries have been attracted in a basically labour-surplus economy. The four fundamental limitations encountered by the planners were described as the openness of the economy, the relatively small role played by the public sector though this is improving, the dependence on foreign commercial capital for industrial growth, and the dominance of international corporations in resource-exploitation--oil in Trinidad.[17] The openness presents a problem in measuring external demand since external demand conditions are subject to change. The smallness of the public sector has worked against influencing the private sector to operate in conformity with the national plan. The dependence on inflows of private commercial capital has raised serious problems of implementing projections. It has chiefly caused a shift in emphasis on plan priorities in the direction of S.O.C. to facilitate

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[16] Ibid., p. 73.

[17] William G. Demas, The Economics of Development in Small Countries, op. cit., pp. 141-142.

investment. And the dominant role played by the mining sector has created a situation in which planning depends on the development of effective relationships between the governments and the companies. Government has to acquire extensive knowledge of the technical conditions of the industry both locally and abroad, and on world supply and demand conditions.[18]

The Choice of Development Strategy

It emerged from the last chapter that unemployment is the most serious economic problem faced by the country. The commercial policy of "industrialization by invitation" was not nearly as successful as was hoped. It not only failed to provide the estimated number of jobs, but its cost per job has been prohibitively high. If we also consider that the export sector has been reducing its labour input while the labour force is growing at a rapid rate, it will become clear that the economy is becoming less able to absorb the growing labour force. With the limited absorptive capacity of the government sector, and the presence of a young and literate labour force, the unemployment problem is particularly explosive.

A theoretical approach to the problem was initiated with the publication of an article by Dudley Seers, which was based on the experience of Venezuela, another petroleum economy, but was thought to have some relevance to Trinidad and Jamaica. The essential characteristics of Seers' model "that exports consist largely of petroleum, that government expenditure is very largely financed by

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[18] Ibid., pp. 143-144.

petroleum revenues, and that petroleum companies are foreign-owned",[19] fits the Trinidadian situation perfectly. Certain broad general assumptions were postulated:

1) Revenue is determined by the level of exports; if there is no budget deficit, expenditure is determined in the same way.

2) Expenditure consists very largely of wages and salaries, and the higher the average income of those in employment, the smaller the number who will be employed by the government.

3) In the private domestic sector, the volume of employment depends mainly on the wage level. The more quickly wages rise, the more difficult it is to absorb increases in the labour force.

4) Employment is also influenced by the rate of taxation on exports, profit margins in domestic industries and the proponsity to import.

5) Reductions in the tax rate of exports, or rises in domestic profit margins or in the proponsity to import will aggravate the tendency to unemployment.

6) The assumption is made that the petroleum revenues are fully passed on at each stage. But there may well be a surplus in the public accounts, if the government does not adjust its budget to the rapidly rising revenue. Then the rise in employment will be slower than it would otherwise be. In other words, the balance in the public account is another influence on employment.[20]

From these general assumptions, further simplifying assumptions were made to fit the model. Budget and foreign payments were assumed to be in balance. The average wages of each sector were held to be changing in step and the labour force in the petroleum sector was constant. Total pre-tax profits were to be divided between revenue

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[19] Dudley Seers, "The Mechanism of an Open Petroleum Economy", Social and Economic Studies, Vol. 13, No. 1 (I.S.E.R., 1964), p. 233.

[20] Ibid., p. 234.

and profits in some unspecified way. Furthermore, imports were assumed to be absorbing a constant proportion of private domestic demand, and profit margins were assumed constant in the private domestic sector.[21] With the aid of some simple mathematical constructs, Seers arrived at the novel conclusion that employment depended on the trend in exports, but equally important were trends in wage rates. In other words, the greater the excess of export growth over the rise in wage rates, the faster employment would climb. Certain other observations were made of the functioning of such economies. For instance, labour was a small part of the cost of petroleum industries, and they were partly subsidized by being a deduction in the declaration of taxable income. A more crucial point which has strong applicability to Trinidad, was the fact that wages in petroleum got out of line with other wages which creates some envy, and thus encourages unions in other sectors to press for parity--a sort of "demonstration-effect" of wage rates. This makes it difficult to develop new exports, because of rising costs. There is the inevitable exodus from the countryside to the cities, so that disguised unemployment in the countryside becomes open unemployment in the towns. What is, therefore, the most significant aggregate in these economies is total employment rather than national product. As we have already seen, it is not that income is inadequate, but that unemployment, structural unemployment, is chronic. It is also correctly observed that investment is induced rather than autonomous. The contention here is that it does not depend

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[21] Ibid., pp. 240-241. [22] Ibid., pp. 254, 241.

on savings. Another observation, which one may be tempted to associate with the development plans for Trinidad, is the fact that governments are tempted to spend revenues on lavish highways or housing schemes rather than in enlarging the goods producing capacity of the country by building factories. Indeed, public works have high political value, since they are labour-intensive and are visible for all to see.[23]

An attempt was subsequently made by Havelock Brewster to take Seers' model further and to assess its applicability to Trinidad and Tobago. He was persuaded to the viewpoint that Seers' conclusion was close to tautology. The important question, he felt, was not whether absolute employment is increasing, but whether the level of unemployment is being stabilized.[24] This point is demonstrated in Table XXXI where in fact, absolute employment increased, with unemployment following suit. On the empirical side, it was shown that the wage trend was in excess of the export trend, which according to Seers' model would imply that absolute employment cannot grow. Yet it was found that absolute employment increased by nearly 40 per cent in a six year period (1957-1963) where the trend was observed.[25] The reason for the inconsistencies in Seers' approach were associated with the fact that the variables he assumed constant like the export tax rate, the domestic profit margin and the import coefficient were in

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[23] Ibid., pp. 235,237. It must also be noted in the Trinidadian situation that the limited size of the market would reduce but not eliminate completely the choice of investment projects in manufacturing.

[24] Havelock Brewster, "Exports, Employment and Wages: Trinidad-Tobago and Mr. Seers' Model of the Open Economy", C.S.O. Research Papers, No. 5, April, 1968 (Port-of-Spain, 1968), p. 2.

[25] Ibid., p. 10.

fact, subject to changes. It was also found that the Seers' model was more consistent with reality the further back in time that it was taken. In the present context, because it ignores structural changes, the implausible proposition is countenanced that "if exports were to stagnate in any particular year in Trinidad-Tobago or Jamaica, there would be no increase in total income.[26] Employing and extending the simple mathematics of Seers' model within the framework of data for Trinidad and Tobago, it could further be shown that stabilization of the level of unemployment was consistent with wage rises. The general conclusion was that Seers' model was empirically inconsistent and it diverted interest and policy from the substantive and dynamic issues of structural transformation, the initiation of productive activity, and the creation of productive employment.[27]

In a more specific study on Trinidad, Seers conceded that one had to look more deeply than national income trends to explain what had happened. Indeed, beyond the science of economics for possible solutions to the problem of unemployment. "It is much easier to see the interaction of political and economic forces when the scale is small",[28] he argued. Relaxing his earlier assumptions, he approached the problem from the framework of the simple Keynesian consumption/income analysis. Apparently drawing from studies of consumption in

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[26] Ibid., pp. 20-21.

[27] Ibid., pp. 17, 21. In fact our data shows (Table II) that exports in 1962, 1965 declined over their respective preceding years, yet only in 1962 was employment in large establishments affected (Table XXX) and national income (Table XXXIII) in each case, on the contrary, increased.

[28] Dudley Seers, "A Step Toward a Political Economy of Development", op. cit., p. 219.

countries like Trinidad, he proposed that the richer a person was, the higher the proportion of his income he spent on luxury imported items. However, one can equally argue that there may be increased demand for non-imported services. Tastes, Seers continued, were an importation of foreign middle class values and were further reinforced by advertising. Unemployment was, therefore due partly to imported production techniques and partly imported consumption tastes.[29] Keenly recognizing that the relatively "educated"[30] labour force had a strong preference for white-collar jobs, a public works strategy of public construction, slum clearance, construction of dwellings and, road-building was recommended as the core of any policy of rapid elimination of unemployment. Increased output in construction, and in other sectors which produce goods, was seen to generate white-collar jobs (i.e. clerks, typists, filing clerks and so on), both directly and indirectly through increased use of administrative services. Government services would have to increase and would also increase the supply of white-collar jobs. In addition, the actual construction

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[29] Ibid., pp. 228-229. In Trinidad the importation of radios, radiograms, refrigerators and more recently television sets have steadily increased, although with local assembly of these items, their importation is expected to fall. For example, radios imported increased from 10,000 in 1956 to 29,000 in 1962; radiograms from 1,000 in 1956 to 3,675 in 1960; refrigerators from 3,800 in 1956 to 12,000 in 1960; and motor cars in the country from 1 per 43 persons in 1953 to 1 per 20 persons in 1965. See C.S.O., Trinidad and Tobago Today: A Graphic Presentation of Social and Economic Statistics (Port-of-Spain, 1966), pp. 49-50.

[30] The fact that literacy is high is no indication of the quality of the country's labour force. Many of the skills of the technological age such as engineers, chemists, physicists and accountants are still in short supply. The education system has been blamed for producing more professionals, teachers in the arts, doctors and lawyers relative to the above mentioned skills. This is a common feature of many former colonies. See Eric Williams, "Trinidad and Tobago", Current History, Vol. 56, No. 329 (Philadelphia, 1969), p. 47.

could generate many unskilled jobs.[31] To my mind, this approach could hardly be viewed as suitable for a long run approach to the problem. The question of what was to become of the labour force after the infrastructure had been created was not given much attention by Beers. Three possible strategies, called hypothetical solutions, were enunciated to raise the capital requirements. They were to involve fiscal virtue, controlled inflation or the Cuban System.[32] Fiscal virtue implied lowering the import coefficient and two suggestions were made; either increasing taxes or the earlier suggestion of increasing taxes on traditional exports--i.e. petroleum. Controlled inflation meant that the government might suppress the import coefficient through the use of import and exchange controls instead of taxation, but even the author questions whether this can be implemented without introducing attendant evils like "black-marketeering" and smuggling. The Cuban System, the most controversial of the three, of course involved central planning and comprehensive controls, extensive nationalization, higher taxation, wage stabilization, mobilizing youth for work in the countryside, and breaking away politically from the United States. After soberly discussing the pros and cons of such a system for Trinidad, it was agreed that it would not only create economic but political difficulties. Both the O.A.S. and the U.S.A. would be actively hostile to such a step.[33] It was finally agreed that unemployment

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[31] Beers, "The Political Economy", p. 235. Demas also suggested this approach. See W.G. Demas, Economics of Development, op. cit., pp. 133-134.

[32] Beers, Ibid., pp. 236-238.

[33] Ibid., pp. 238-239.

would increase but could be arrested in the 1980's. This could be done by modifying economic planning to reflect political constraints, which would indicate two changes; lengthening the plan period and placing less emphasis on economics. Industrialization should be made more selective by reviewing present incentives and placing heavier emphasis on employment created. Incentive rewards could even be given for labour intensity. A professional corps could be created by attracting more nationals to return home and by initiating a more ambitious training programme of those at home. Consumer attitudes could be altered and the least painful way suggested was credit squeezes and restrictions on advertising. Foreign-owned commercial banks are cited as abetting conspicuous consumption by granting consumer loans in the face of chronic unemployment. Restructuring of wages can also be achieved by making scarce skills more lucrative by wage incentives. It may be a good idea, in my opinion, to apply this approach to correct the inequity in the wage rates earned by skilled workers like machinists as opposed to unskilled white-collar workers like clerks. Traditionally, clerks have commanded higher wages in Trinidad than more productive blue-collar workers like electricians, welders, and so on.[34] This has increased workers' preferences for white-collar jobs and the comparison is made in Table XLVII. Another point brought out

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[34]Indeed factors of supply and demand are operating here. For instance, rapid expansion of say the public sector in the 1950's may have created a greater demand for clerical workers, but this situation is by no means static. Given the present situation of a "brain-drain" of skilled personnel (Third Plan, pp. 100-101), it would seem that the time is appropriate for such change mentioned above. Demas, op. cit., pp. 78-79, shared a similar opinion.

TABLE XLVII

COMPARISON OF PREVAILING WAGE RATES IN SELECTED INDUSTRIES AT 31ST DECEMBER, 1965

Industry	Type of Worker	Wage Rates Minimum	Maximum
Petroleum	skilled	$ 1.17 per hr.	$ 1.62 per hr.
	semi-skilled	1.05 per hr.	1.75½ per hr.
	unskilled	0.94½ per hr.	1.32½ per hr.
	clerical	47.60 per wk.	96.10 per wk.
Construction	skilled	1.30½ per hr.	2.11 per hr.
	semi-skilled	1.14 per hr.	1.75 per hr.
	unskilled	1.02½ per hr.	1.17 per hr.
	clerical	N.A.	N.A.
Commercial	skilled	0.51 per hr.	1.37 per hr.
	semi-skilled	0.34 per hr.	1.10 per hr.
	unskilled	0.23 per hr.	0.89 per hr.
	clerical	20.00 per wk.	76.00 per wk.
Manufacturing	skilled	0.35 per hr.	1.47 per hr.
	semi-skilled	0.44 per hr.	1.33 per hr.
	unskilled	0.41 per hr.	1.22 per hr.
	clerical	23.00 per wk.	81.00 per wk.
Light Engineering	skilled	0.89 per hr.	1.38 per hr.
	semi-skilled	0.77 per hr.	1.03 per hr.
	unskilled	0.35 per hr.	0.90 per hr.
Shipping/Transport	skilled	1.00 per hr.	1.42 per hr.
	semi-skilled	0.91 per hr.	1.36 per hr.
	unskilled	0.85 per hr.	1.15 per hr.
	clerical	37.00 per wk.	83.00 per wk.
Garment Industry	skilled	20.00 per wk.	35.00 per wk.
	semi-skilled	18.00 per wk.	30.00 per wk.
	unskilled	15.50 per wk.	22.00 per wk.
Waterfront	skilled	1.20 per hr.	1.86 per hr.
	semi-skilled	0.88 per hr.	1.20 per hr.
	unskilled	0.73 per hr.	1.10 per hr.
Government (public utilities etc.)	heavy equipment operator	1.04 per hr.	1.29 per hr.
	skilled	0.84 per hr.	1.05 per hr.
	semi-skilled	0.80 per hr.	0.89 per hr.
	unskilled	0.73 per hr.	0.82 per hr.
Wholesale and Distributive	clerical work	22.75 per wk.	30.00 per wk.
	checker/cashier	26.00 per wk.	35.00 per wk.
	vehicle driver	26.00 per wk.	30.00 per wk.
	floor-walker/ supervisor	32.50 per wk.	50.00 per wk.
	loader, porter, messenger	17.55 per wk.	25.50 per wk.
	sales clerk	15.60 per wk.	35.00 per wk.
	wrapper/packer	19.50 per wk.	30.00 per wk.

Source: Trinidad and Tobago Industrial Development Corp., Industrial Investment Possibilities in Trinidad and Tobago (Port-of-Spain, no date), pp. 22-23.

Notes: skilled includes electricians, welders, machinists, carpenters, etc.

Construction	skilled	1.30½ per hr.	2.11 per hr.
	semi-skilled	1.14 per hr.	1.75 per hr.
	unskilled	1.02½ per hr.	1.17 per hr.
	clerical	N.A.	N.A.
Commercial	skilled	0.51 per hr.	1.37 per hr.
	semi-skilled	0.34 per hr.	1.10 per hr.
	unskilled	0.28 per hr.	0.89 per hr.
	clerical	20.00 per wk.	76.00 per wk.
Manufacturing	skilled	0.35 per hr.	1.47 per hr.
	semi-skilled	0.44 per hr.	1.33 per hr.
	unskilled	0.41 per hr.	1.22 per hr.
	clerical	25.00 per wk.	81.00 per wk.
Light Engineering	skilled	0.89 per hr.	1.38 per hr.
	semi-skilled	0.77 per hr.	1.03 per hr.
	unskilled	0.35 per hr.	0.90 per hr.
Shipping/Transport	skilled	1.00 per hr.	1.42 per hr.
	semi-skilled	0.91 per hr.	1.36 per hr.
	unskilled	0.85 per hr.	1.15 per hr.
	clerical	37.00 per wk.	83.00 per wk.
Garment Industry	skilled	20.00 per wk.	35.00 per wk.
	semi-skilled	18.00 per wk.	30.00 per wk.
	unskilled	15.50 per wk.	22.00 per wk.
Waterfront	skilled	1.20 per hr.	1.86 per hr.
	semi-skilled	0.88 per hr.	1.20 per hr.
	unskilled	0.79 per hr.	1.10 per hr.
Government (public utilities etc.)	heavy equipment operator	1.04 per hr.	1.29 per hr.
	skilled	0.84 per hr.	1.05 per hr.
	semi-skilled	0.80 per hr.	0.89 per hr.
	unskilled	0.78 per hr.	0.82 per hr.
Wholesale and Distributive	clerical work	22.75 per wk.	30.00 per wk.
	checker/cashier	26.00 per wk.	35.00 per wk.
	vehicle driver	26.00 per wk.	30.00 per wk.
	floor-walker/ supervisor	32.50 per wk.	55.00 per wk.
	loader, porter, messenger	17.55 per wk.	26.50 per wk.
	sales clerk	15.60 per wk.	35.00 per wk.
	wrapper/packer	19.50 per wk.	30.00 per wk.

Source: Trinidad and Tobago Industrial Development Corp., Industrial Investment Possibilities in Trinidad and Tobago (Port-of-Spain, no date), pp. 22-23.

Notes: skilled includes electricians, welders, machinists, carpenters, etc.
semi-skilled includes crane operators, operators of factory machinery, vehicle drivers, etc.
unskilled includes labourers, packers, truckers, cutlass-men, road repairers, messengers, cleaners, etc.
clerical includes accounts clerks, filing clerks, typists, time keepers, etc., except those in supervisory positions and office boys.

by Seers, is the need to radically alter the education system in such a way as to reflect the country's position in the Hemisphere. And if I may add, greater emphasis should be placed on engineering trades and commercial subjects. Finally, the need to reduce external pressures is taken from the standpoint that foreign companies should, as far as possible, utilize labour-intensive techniques to safeguard their long term interest which can be threatened by growing unemployment. Seers' approach here calls for diplomatic exchanges with the State Department, U.S.A., with a view to levering some influence on the behaviour of international companies operating in the area.[35] To my mind, this approach has serious limitations, since it would certainly be opposed in political circles at home. Besides, it would seem more feasible to work within the framework of the incentive programme, by rewarding industry for labour intensity, as mentioned above.

However, a more general approach to the problem, again utilizing an integration approach, appeared in the work of Brewster and Thomas in their "Dynamics of West Indian Economic Integration".[36] Their concept of integration differed fundamentally from Lewis'. It was to be interpreted as a diffusion of attributes of strength and weakness throughout the integral parts of a system, and not simply a mechanism for linking disconnected units, whether by eliminating forms of discrimination or co-operation in eliminating conflicts of aims.[37]

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[35] Ibid., pp. 245-249.

[36] Havelock Brewster and Clive Y. Thomas, The Dynamics of West Indian Economic Integration, University of the West Indies (Jamaica, 1967).

[37] Ibid., p. 2.

To quote them,

> integration in the West Indies should not be limited to those conditions which govern the exchange of goods, but should also include in its perspective the integrated production of goods.[38]

In other words, it was through the integration of production that they visualized the most important economic gains. Lewis, on the other hand, was concerned mainly about increasing the size of the market with its accompanying economies of scale, and the free movement of goods and labour.[39] Given this difference in approach, Brewster-Thomas left the door open for extra-regional participation by some of the Spanish, French or Dutch speaking neighbours. Furthermore and in agreement with Lewis, a customs union was recommended instead of a free trade area, bearing in mind that the difference between the two means that in the one, there are no internal tariff barriers, but common external tariffs, whereas in the other only internal tariff barriers are removed.[40] A detailed study was then undertaken, highlighting issues related to economies of scale and allocative efficiency. Given the resources of the area, the market demand, and vigorously addressing themselves to the problem of import-substitution

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[38] Ibid., p. 19. Best has, however, argued that if the metropolitan region decides to integrate the region through firms operating in several territories, the flow of output would be to the metropolis and not the region. Lloyd Best, "Current Development Strategy and Economic Integration in the Caribbean", in Caribbean Integration, The Caribbean Scholar's Conference, Guyana, 1966, Institute of Caribbean Studies (Puerto Rico, 1967), p. 58.

[39] W. Arthur Lewis, "The Industrialization of the British West Indies", op. cit., pp. 30, 39.

[40] Brewster and Thomas, op. cit., pp. 6, 19. The present CARIFTA falls into the latter category. The prospects for extra-regional are promising in that British Honduras and the Dominican Republic have so far expressed interest in joining. Third Plan, op. cit., p. 16.

in the area, the authors proceeded to assess the feasibility and long term prospects of various industries in the area, the results of which have been widely utilized in the third five year plan above. The study is at once a more rigorous and detailed approach than Lewis', but recognizing the difficulties faced earlier it hastened to name the "low level of political commitment" as the chief stumbling block.[41] However, it is not unlikely that this stumbling block may be removed if regional co-operation improves as a result of the operations of CARIFTA.

In my opinion, there is no cut and dried short-term solution to the unemployment problem, yet it is an urgent problem. Public works expenditure is obviously helpful, but it is well known that it serves only as a stop gap measure and is often wasteful. Since employment in the traditional export sector, is declining on account of the introduction of labour saving technology, it would seem that the solution would lie within the manufacturing and public sectors.[42] As we mentioned the shortcomings of a public works strategy above, our alternative would lead us to examine the possibilities in the manufacturing sector.

"Industrialization by invitation" is by no means unique to Trinidad. For that matter, many mature economies in Europe and even Canada give incentives of one sort or another to attract foreign capital. What must, however, be done is to see that the right type

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[41] Ibid., p. 27.

[42] In the case of petroleum, however, it is recalled that employment depends to a large degree on crude oil production rather than refining or the production of petroleum products. In other words, large crude oil discoveries can alter the situation drastically in favour of increased employment.

of capital is attracted to suit our circumstances of surplus labour. This can be done by discriminatory incentives for labour-intensity as Seers suggested, and mentioned above. This can take several forms; for instance, the length of the tax holiday can be lengthened depending on the labour-intensity or government loans and added assistance can be given in the establishment and equipment of the factory site or building. The question of business efficiency not being consistent with labour-intensity has certainly not been the case in Hong Kong, or perhaps Singapore. The fact that wage levels may be higher in Trinidad than in these countries, may no doubt be due to an over-valued rate of exchange. Devaluation, then, should not be ruled out entirely. A small insignificant country like Trinidad can easily devalue its currency without drawing reciprocal actions from its trading partners, since Trinidad's exports to these countries, U.S.A., U.K. and the Commonwealth, are only a small fraction of their imports. The only source of trouble, I believe, is within the Commonwealth Caribbean countries, since the Trinidadian dollar is equated with the Guyanese, Barbadian, and Eastern Caribbean dollar. In this regard, the problem must be studied carefully and in concert with these territories. Then there is the internal impact of devaluation on prices of imports, and the country's position within the Sterling bloc. Indeed, as large imports of crude oil are needed to sustain the petroleum industry, devaluation may be unwise unless these imports can be obtained solely from local resources. Again, devaluation poses problems that can only be resolved by careful study and regional co-operation. If this can be accomplished, then Trinidad and perhaps,

the Commonwealth Caribbean countries may be in a position to compete more favourably for foreign investment.

There are several long term modifications that can go a long way towards alleviating the problem of unemployment. To list a couple; educational reform to place greater emphasis on required engineering trades and commercial subjects, agricultural reform to make agriculture more profitable and therefore stimulate wider interest in it by improving marketing and storage facilities. A full treatment of this problem would justify more space than can be allowed here; and it remains to be said that there is considerable scope.

CHAPTER V

CONCLUSION

The thesis of this study is that the rapid economic growth of Trinidad as measured by its G.N.P., is strongly correlated with a rapid expansion of exports, but that economic growth is not necessarily accompanied by economic development, if in this term we are to include self-sustained growth. Empirical evidence for 50 other less developed countries studied by Robert Emery supports the first contention. The second contention has been the experience of Trinidad since the Second World War. If we are to go beyond the standard criterion of raising per capita income and to include the creation of a strong and flexible economic structure, capable of diffusing widely based growth and absorbing labour productivity, then limited success has been achieved.

Exports have grown from $46 million in 1946 to $932 million in 1968. Over the same period, we have seen government revenue grow from $42 million to $340 million. National income, per capita national income, G.D.P., G.N.P. have all had similar increases. The trend has been maintained on the import side with imports climbing from $75 million to $840 in the same period. Unemployment, as a percentage of the labour force has, on the contrary, grown from 10 per cent to 14 per cent. If we include the large numbers of the underemployed, the latter figure would be over 20 per cent. The

structure of export trade has become increasingly dominated by one commodity, petroleum, While it accounted for 65 per cent of exports in 1946, by the late 1960's it was responsible for more than 80 per cent. The picture becomes even clearer when we consider that exports have averaged around 65 per cent of the G.D.P. This means that growth of the country's income is significantly dependent on export activity in the petroleum industry. This, however, is not conceptually without virtue, since if income generated in this sector is readily available to the domestic economy, the capital needed to transform the economy would not pose a problem. But foreign ownership of the export sector has been a permanent fact of the country's economic life, so that there are substantial leakages amounting to about 10 per cent of the G.N.P. through repatriation of profits and factor payments abroad (see Table XXXIII). (Corporation tax is at present 45 per cent of chargeable profits and a withholding tax ranges between 15 per cent to 30 per cent depending on adjustments made in Double Taxation Agreements.[1]) A probable result of the structure of foreign ownership, is the failure of the domestic economy to finance productive investment outside of the public sector. It is, however, conceded that the low savings ratio and a lack of government commitment to industrial investment may also be important here too. But one would expect that government's concentration on infrastructure is only natural in a developing country lacking some basic infrastructure, yet there is undoubtedly room for government participation in productive investment.

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[1]Gov't of Trinidad and Tobago, A Statement on the Implementation of Government's Petroleum Policy. Gov't Printer, Port-of-Spain; 1969, p. 5.

Another important factor that militates against structural transformation, is the size of the domestic market. With a total population of little over a million, and tariff barriers and quotas in both the metropolitan countries and the larger Latin American countries, the inducement to invest is very weak for many industries. A free trade area of other Commonwealth Caribbean countries will enlarge the market to over three million, which still precludes the development of heavy industry,[2] but would facilitate the development of many medium-sized industries which would not have been attracted to the Trinidad market alone. The lesson here is that the stimulus will rest with the external sector. Other factors which impinge on the size of the country are, of course, the skewed supply of resource inputs, and the international "demonstration effect". These two factors largely contribute to the country's high propensity to import. This leaves us to conclude that structural transformation in the sense of widely based growth is a difficult and perhaps improbable task for a small country of one million to approach by itself. It is in this regard, that the recent Caribbean Free Trade Association (CARIFTA) is of prime importance to Trinidad. This would also imply that the growth of the economy would continue to be determined by activity in the external sector. Indeed, small countries generally have to rely on exports for income growth. But the formidable task here is to dampen the influence of the petroleum industry by creating substantial export activity elsewhere. The nature of this task is exemplified by the fact that

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[2] W. Demas, The Economics of Development, op. cit., p. 51.

in 1968 petroleum exports were $724 million and the second largest item, chemicals, accounted for only $82 million in comparison. Manufactures were a paltry $11 million, which means that there must be extremely rapid growth here if it is to act as the stabilizing influence in export diversification and structural change.

It emerges that the export induced pattern of growth has led to some diversification of exports in absolute if not relative terms. Moreover, some diversification of the economy has taken place together with improvements in per capita income and per capita consumption. But the process has been slow and has failed to absorb the growing labour force adequately. Finally, future development plans could conceivably emphasize directly productive investment, in an expanded effort to generate more employment.

APPENDIX A

CENTRAL GOVERNMENT REVENUE AND EXPENDITURE AND ANNUAL BALANCES 1936-1968 (mill. TT$)

Year	Revenue	Expenditure	Balance
1936	12.6	9.1	+3.4
1937	12.3	10.4	+1.9
1938	13.4	12.2	+1.2
1939	13.4	13.0	+0.4
1940	15.5	20.5	-5.0
1941	18.9	16.8	+2.1
1942	23.4	21.2	+2.3
1943	29.2	28.9	+0.3
1944	29.2	31.2	-2.1
1945	30.6	33.7	-3.1
1946	41.9	31.9	+10.0
1947	37.3	37.4	-0.1
1948	45.3	38.6	+6.7
1949	50.9	42.3	+8.6
1950	50.6	50.4	+0.2
1951	59.2	52.9	+6.3
1952	66.8	62.5	+4.3
1953	68.1	66.6	+1.5
1954	73.6	73.7	-0.1
1955	81.9	79.3	+2.6
1956	88.4	86.2	+2.2
1957	101.6	90.1	+11.5
1958	130.0	128.4	+1.6
1959	137.0	168.5	-31.5
1960	162.4	156.4	+6.0
1961	147.9	201.9	-54.0
1962	213.6	211.9	+1.5
1963	232.9	228.5	+4.4
1964	261.1	264.6	-3.5
1965	256.6	250.7	+5.9
1966	263.7	266.5	-2.8
1967	274.5	271.0	+3.5
1968	340.5	304.8	+37.6

Source: C.S.O., Annual Statistical Digest 1962, (Trinidad, 1964), p. 159.
_____, Annual Statistical Digest 1963, (Trinidad, 1970), p. 121.

APPENDIX B

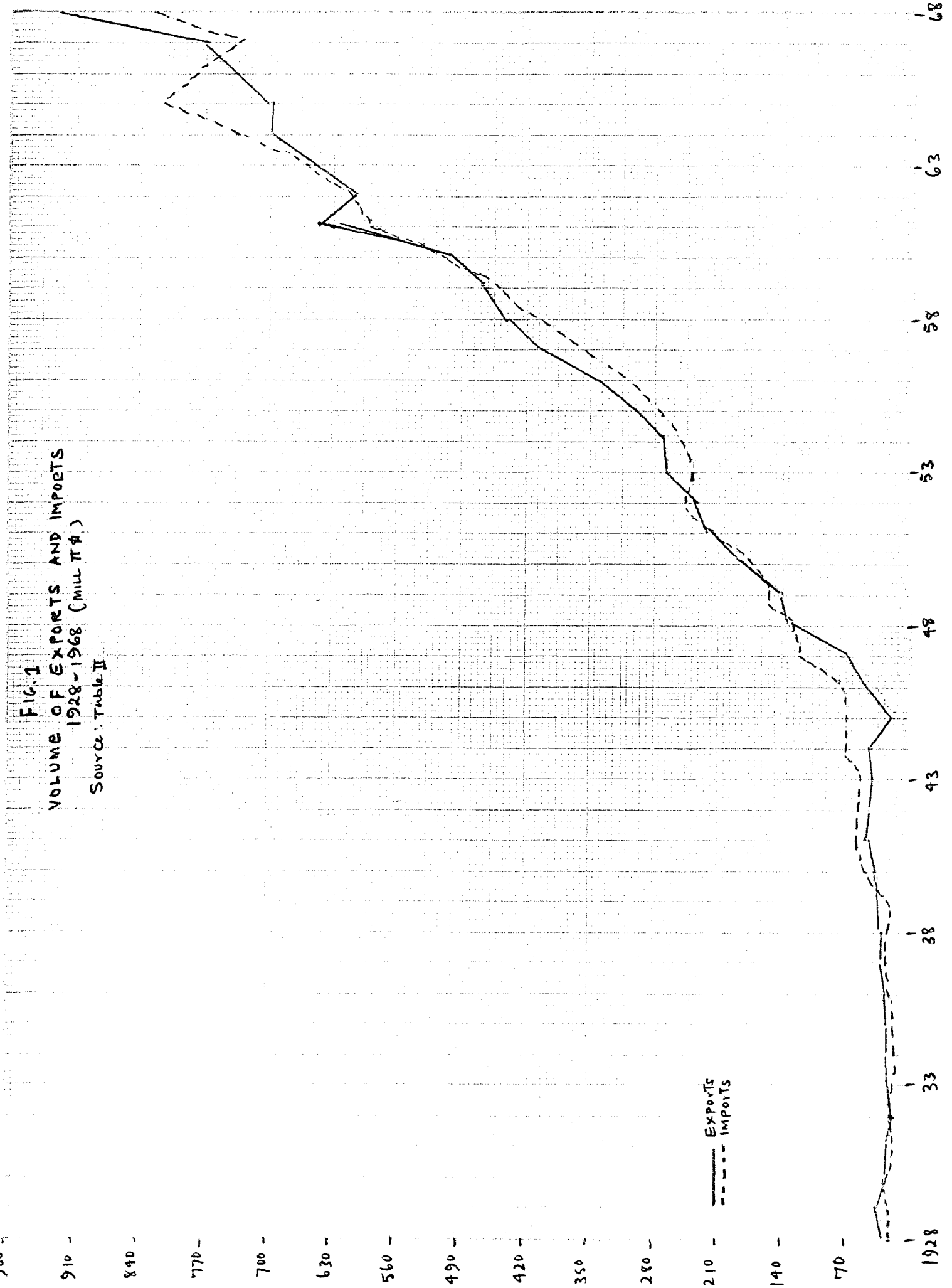
RELATIVE SIZES OF EXPORTS (X), INVESTMENT (I), AND GOVERNMENT SPENDING (G), AS A PROPORTION OF INCOME (Y), IN SELECTED COUNTRIES 1967

Country	X/Y (1967)
X > I + G	
Kuwait (1966)	87
Luxembourg	79
Trinidad and Tobago	67
Guyana	60
Zambia	56
Netherland Antilles (1966)	52
Fiji (1964)	51
Barbados (1964)	51
Puerto Rico	50
Malta	49
Mauritius	43
Netherlands	42
Malaysia (1966)	41
Jamaica	37
Panama	37
Kenya (1966)	35
Ireland	34
Cyprus	33
Southern Rhodesia	33
Sierra Leone	30
Honduras	29
El Salvador	26
Togo (1966)	25
X > I and X > G	
Ivory Coast (1966)	33
Venezuela	30
Nicaragua (1966)	28
Denmark	28
Botswana (1966)	27
Costa Rica	26
Portugal	26
Iran	25
Austria	25
South Africa	24
Bolivia (1966)	22
X > I and X > G (continued)	
China (Taiwan)	22
Syria	21
Ceylon	21
Cameroon (1965)	20
Morocco	20
Peru	18
Burma (1962)	17
Guatemala	17
Sudan (1964)	16
Uruguay	15
Dominican Republic	15
Chad (1963)	15
Chile	15
Nigeria (1963)	13
X > I or X > G	
Norway	42
Iceland	32
Switzerland	31
Tunisia	24
Canada	23
Ecuador	22
West Germany	22
Israel	22
Sweden	22
Finland	21
New Zealand	21
Thailand	20
Ghana	18
Lebanon (1965)	18
Philippines	18
Egypt (1966)	17
Australia	15
France	14
Jordan	13
Lesotho (1966)	13

APPENDIX B—Continued

Country X > I or X > G	X/Y (1967) (continued)	Country X < I and X < G	X/Y (1967)
Colombia	12	British Honduras (1964)	38
Republic of Korea	12	Greece	11
Paraguay	12	Argentina	10
Upper Volta (1966)	11	Brazil (1966)	9
Spain	11	Cambodia (1966)	8
Ethiopia (1966)	11	India (1966)	6
Japan	10		
Mexico	9		

Source: U.N., Yearbook of National Accounts Statistics 1968 (New York, 1969).



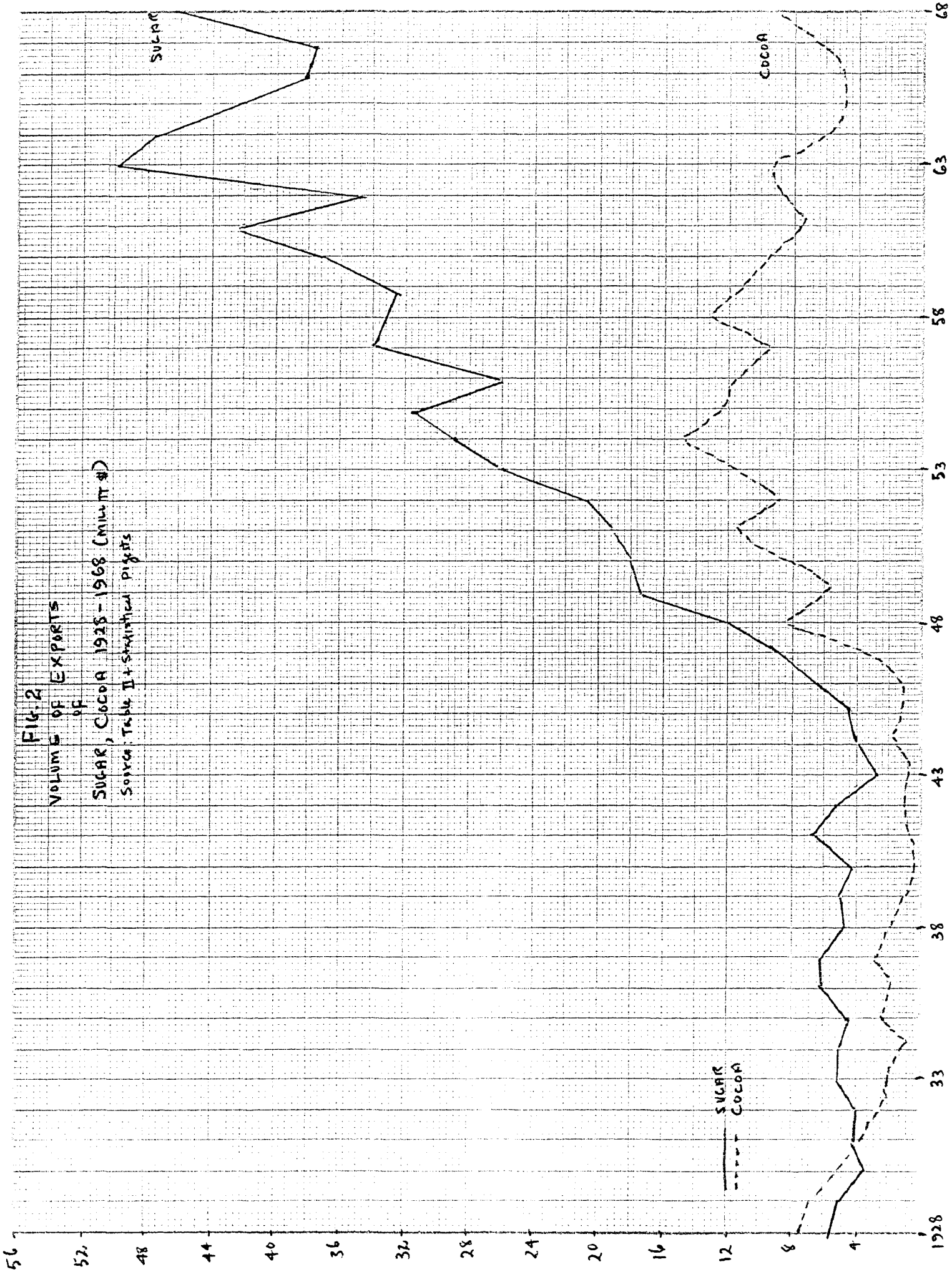


FIG. 2
VOLUME OF EXPORTS OF SUGAR, COCOA 1928 - 1968 (Mill mt)
Source: Table II + Statistical Digests

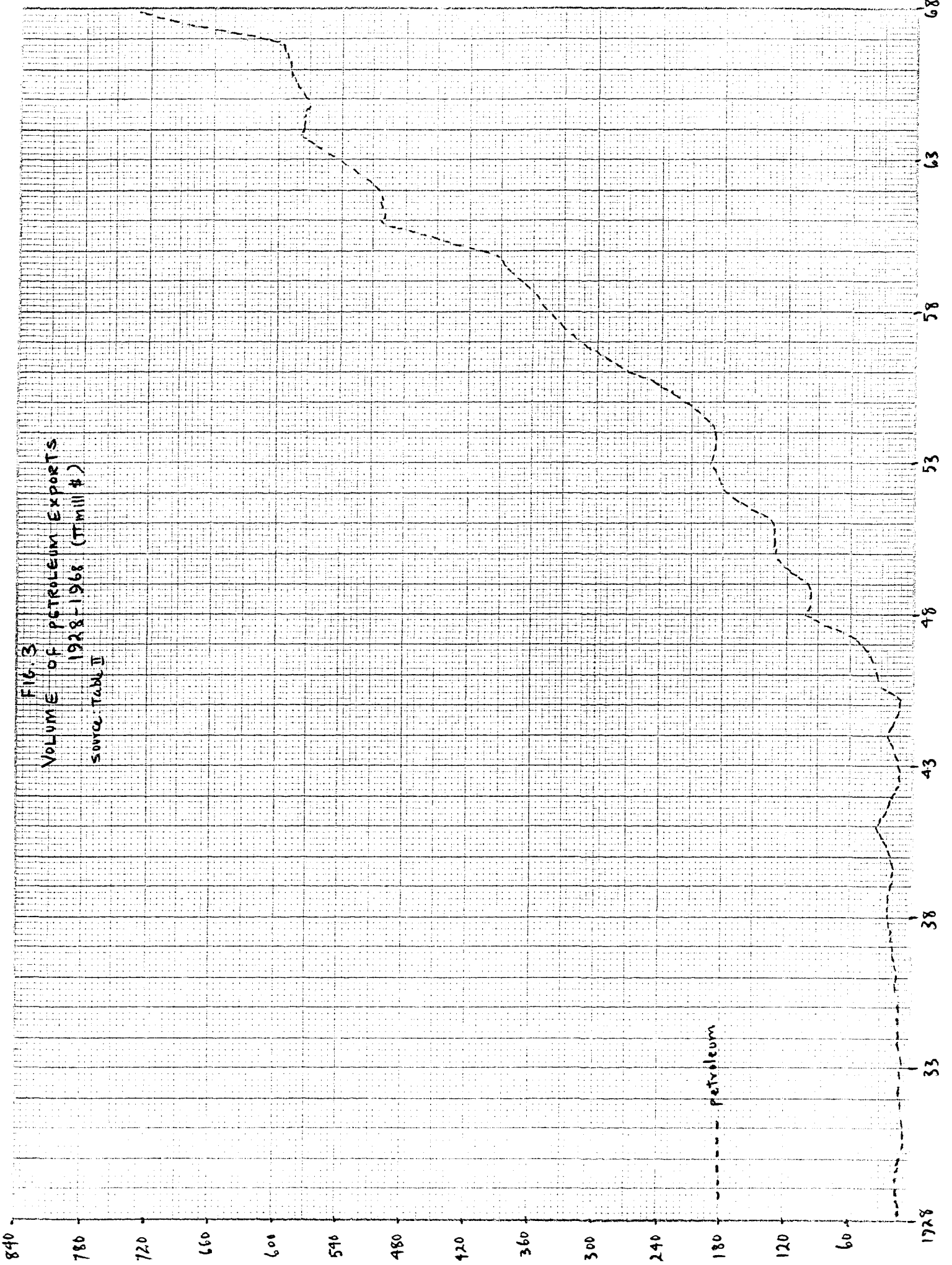


FIG. 4

Trend in Exports and G.N.P. 1952-1967 (TT $ mill.)

Source: Table XX

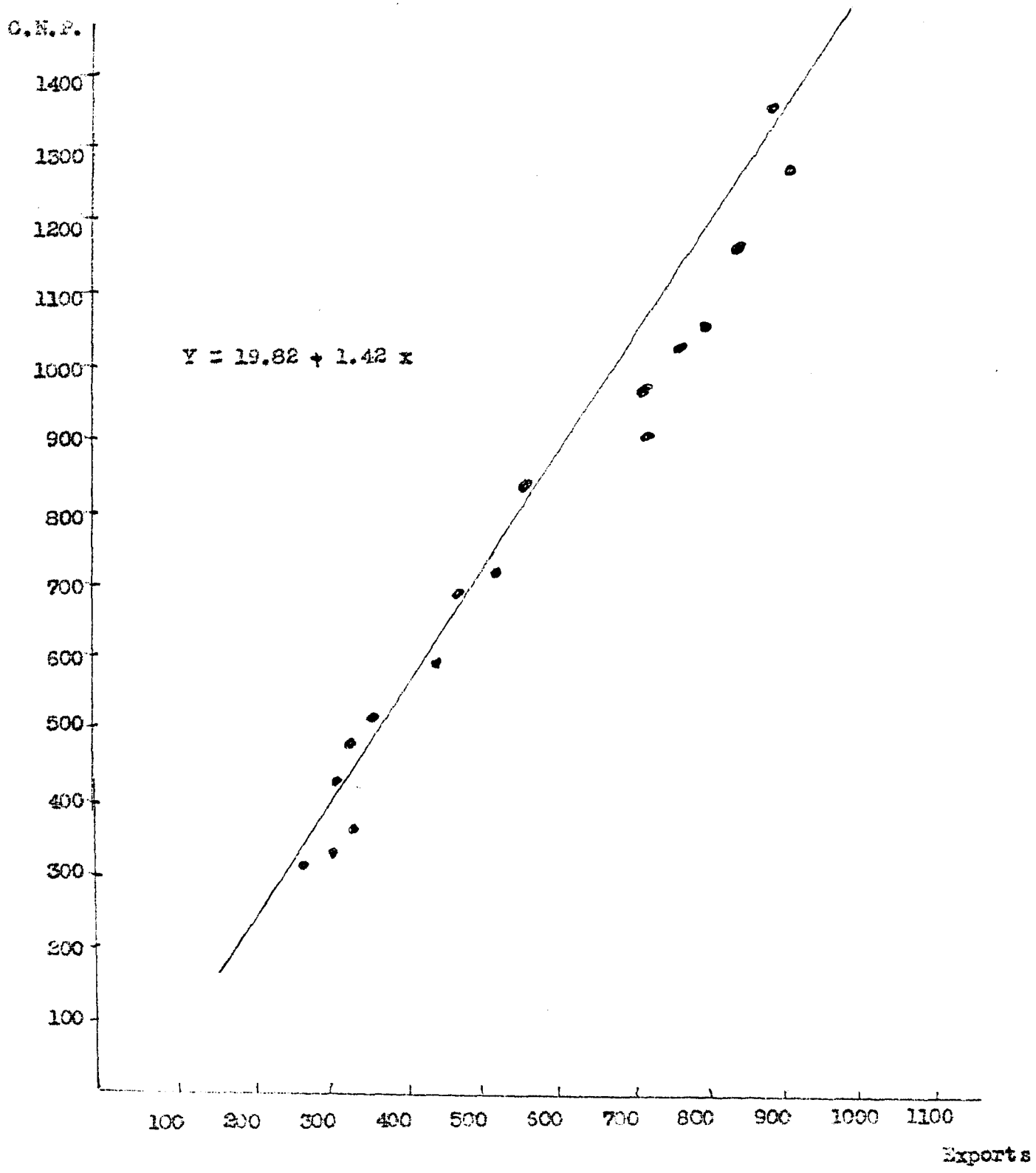


FIG. 5

TREND IN IMPORTS AND G.N.P. 1958-1967 (TT $ mill.)

Source: Table XX

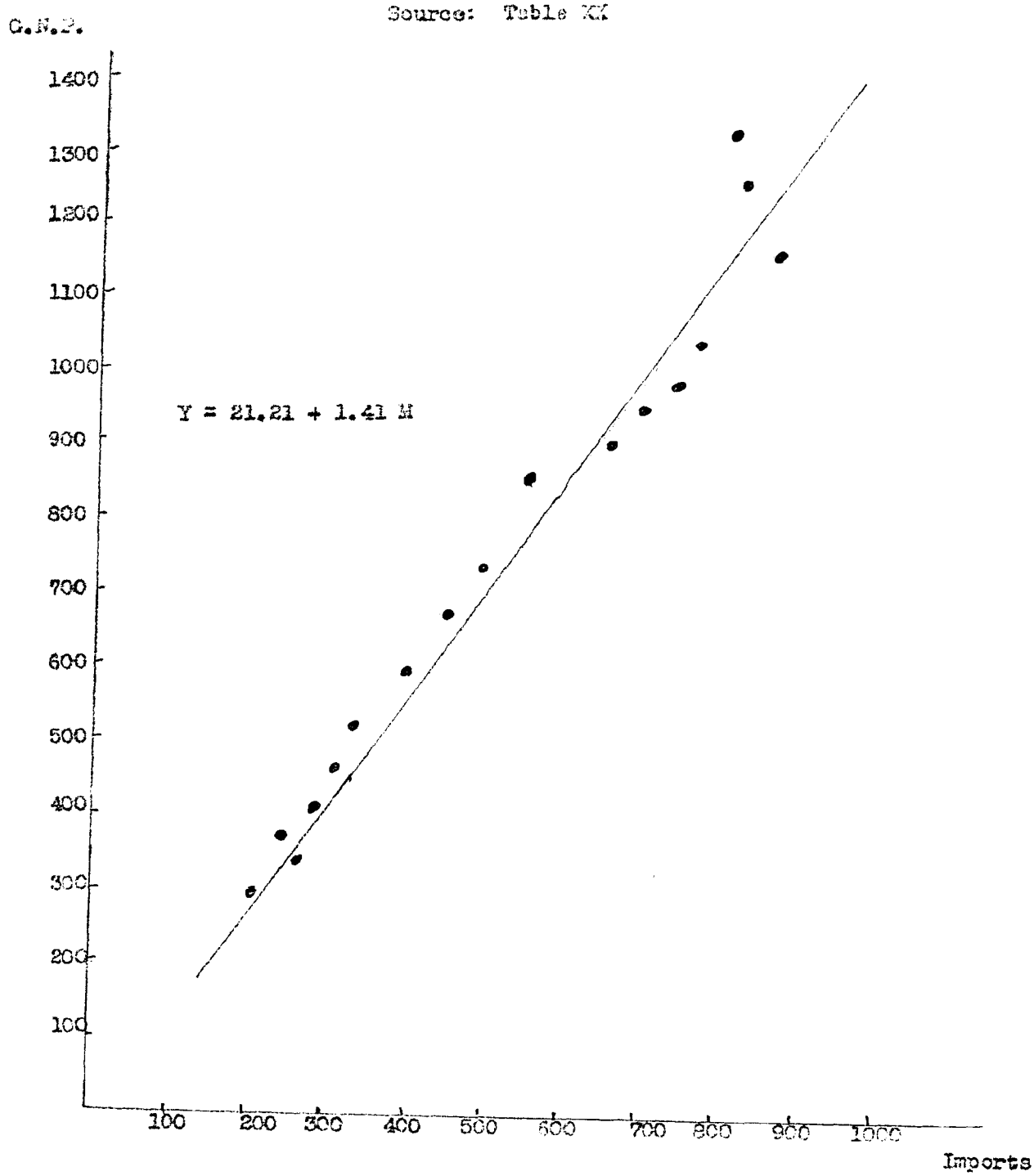


FIG. 6

TRENDS IN PETROLEUM EXPORTS AND G.D.P. (TT $ mill.)

Source: Table XX

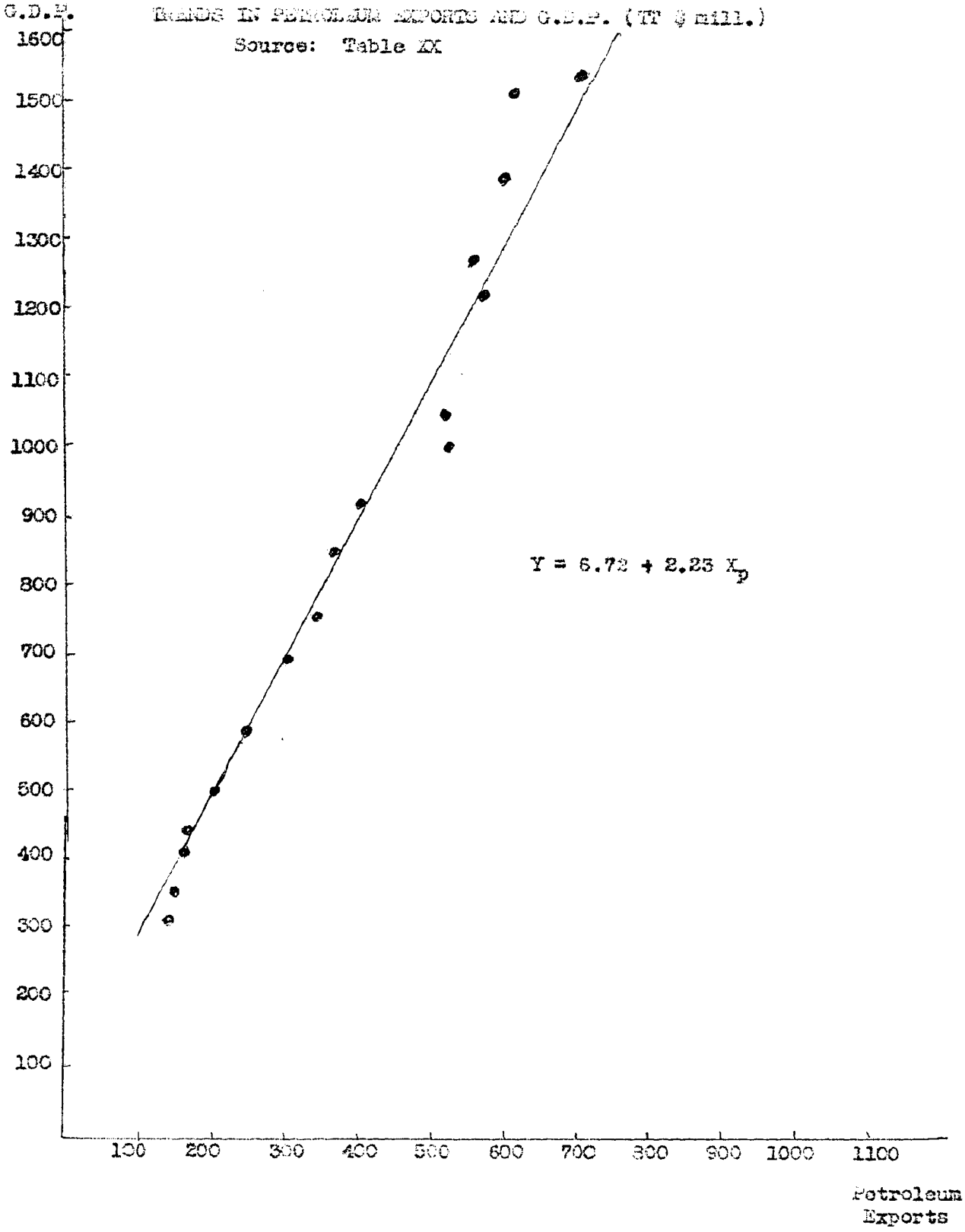
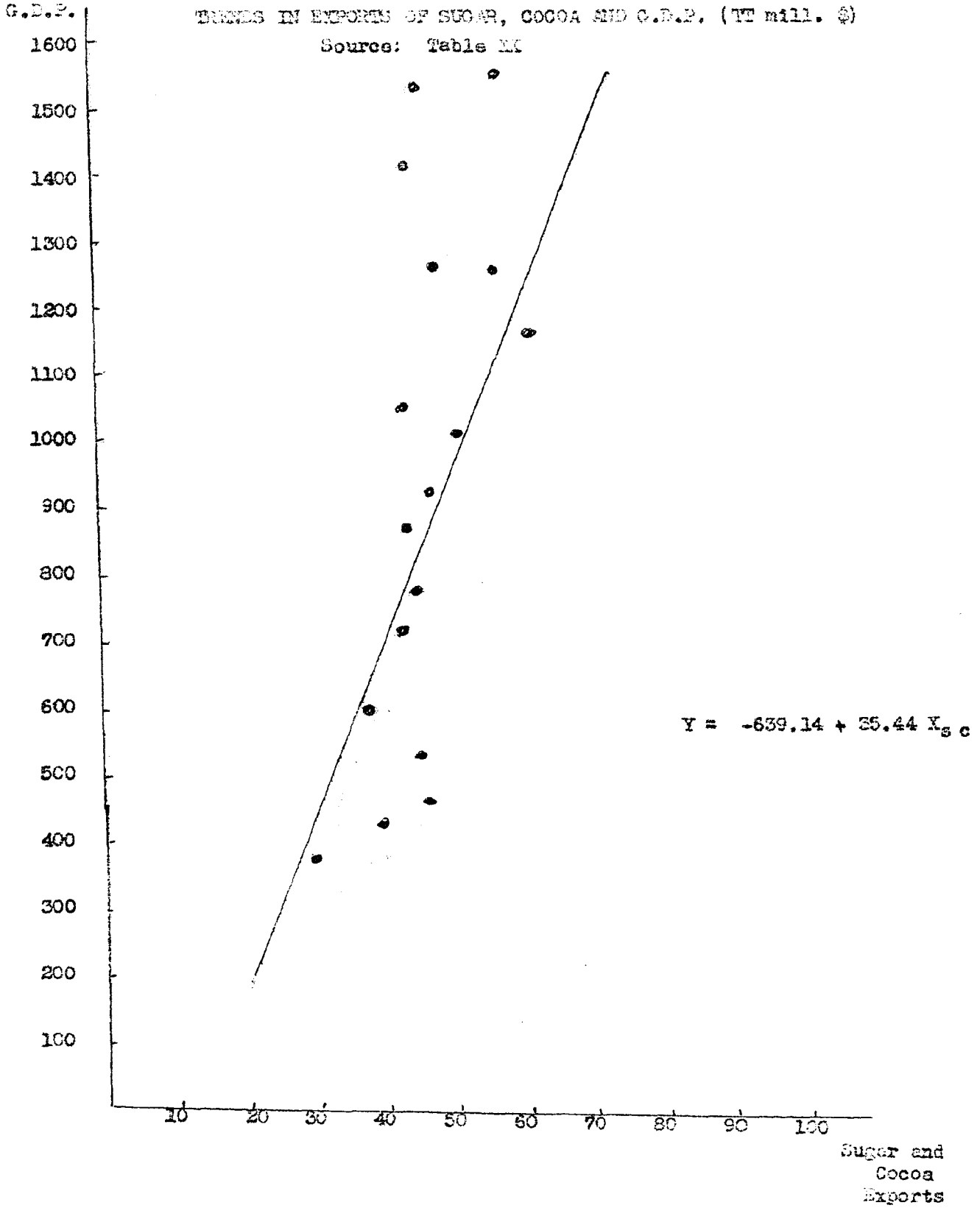


FIG. 7

TRENDS IN EXPORTS OF SUGAR, COCOA AND G.D.P. (TT mill. $)

Source: Table XX



ABBREVIATIONS AND NOTES

1. Trinidad or Trinidad and Tobago is interchangeably used throughout the paper; either is acceptable.

2. I.S.E.R.--Institute of Social and Economic Research of the University of the West Indies.

3. H.M.S.O.--Her (His) Majesty's Stationery Office.

4. C.S.O.--Central Statistical Office of the Government of Trinidad and Tobago.

5. F.A.O.--Food and Agricultural Organization of the United Nations, Rome.

6. Cocoa and Cacao are interchangeably used throughout the paper; they refer to the same thing, but actually, the former is the finished product and the latter, the tree on which it is grown.

7. U.W.I.--University of the West Indies.

8. C.E.C.--Commonwealth Economic Committee, London.

9. The West Indies or Commonwealth Caribbean in this paper refers to Antigua, Barbados, Dominica, Grenada, Guyana, Jamaica, St. Kitts-Nevis-Anguilla, St. Lucia, Monsterrat, Trinidad-Tobago and St. Vincent.

10. TT $ = B.W.I. $ = $0.50 U.S. = $4^s\ 2^d$ 1967 -
= 0.58 U.S. = $4^s\ 2^d$ 1950 - 1967
= 0.76 U.S. = $4^s\ 2^d$ 1949
= 0.84 U.S. = $4^s\ 2^d$ 1940 - 1948
= 0.92 U.S. = $4^s\ 2^d$ 1939
= 1.00 U.S. = $4^s\ 2^d$ 1938
= 1.01 U.S. = $4^s\ 2^d$ 1937
= 1.02 U.S. = $4^s\ 2^d$ 1936
= 1.01 U.S. = $4^s\ 2^d$ 1935
= 1.04 U.S. = $4^s\ 2^d$ 1928 - 1934

11. Dollars always refer to TT $ or British West Indian dollars (B.W.I. $) unless otherwise indicated.

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